

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BRAZIL**

**SÃO BERNARDO DO CAMPO  
URBAN TRANSPORTATION PROGRAM**

**(BR-0400)**

**LOAN PROPOSAL**

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## **APPENDIXES**

Proposed resolution

## **BASIC SOCIOECONOMIC DATA**

For basic socioeconomic data, including public debt information, please refer to the following address:

<http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata>

## INFORMATION AVAILABLE IN THE RE1/FI1 TECHNICAL FILES

### Preparation:

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São Bernardo do Campo Mayor’s Office, “Estudos Adicionais A02 – A05 – A06 – A10 – A11 – D07,” SBCUTPCU/IDB, September 2003.

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São Bernardo do Campo Mayor's Office, "Marco Lógico: Metodologia de Medição," March 2004.

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São Bernardo do Campo Mayor's Office, "Plano de Controle Ambiental – PCA," 2003.

Prefeitura do Município de São Bernardo do Campo, "Pesquisa de Opinião sobre Aspectos relacionados à Mobilidade dentro da Cidade de São Bernardo do Campo pelos seus Municípios," April 2004.

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## ABBREVIATIONS

ABCD	São Paulo area consisting of the municípios of Santo André, São Bernardo do Campo, São Caetano do Sul and Diadema
BEP	Basic environmental project
BNDES	Banco Nacional de Desenvolvimento Económico e Social [National Economic and Social Development Bank]
CEPAC	Certificado de Potencial Adicional de Construção [Construction Capacity Extension Certificate]
CESI	Committee on Environment and Social Impact
COFIEIX	Comissão de Financiamentos Externos [External Financing Commission attached to the Ministry of Planning]
EIA	Environmental impact assessment
EIR	Environmental impact report
EIRR	Economic internal rate of return
EMP	Environmental management plan
EMTU	Empresa Metropolitana de Transportes Urbanos de São Paulo [São Paulo Metropolitan Urban Transportation Company]
ETC	Empresa de Transporte Coletivo de São Bernardo [São Bernardo Mass Transit Company]
GDP	Gross domestic product
GPN	General procurement notice
LDO	Lei de Diretrizes Orçamentárias [Budget Guidelines Act]
LRF	Lei de Responsabilidade Fiscal No. 101/00 [Fiscal Responsibility Act No. 101/00]
MSBC	Município of São Bernardo do Campo
NCR	Net current revenues
NPV	Net present value
OC	Ordinary capital
PCA	Permanent conservation area
PCU	Urban Transportation Program Coordination Unit
PIC	Public Information Center (Inter-American Development Bank)
PMSBC	Prefeitura do Município de São Bernardo do Campo [São Bernardo do Campo Mayor's Office]
PNAFM	“National Program to Support the Administrative and Fiscal Management of Brazilian Municipalities”
PTI	Poverty-targeted investment
RMSP	Região Metropolitana de São Paulo [São Paulo or Greater São Paulo Metropolitan Region]
RSF	Federal Senate Resolution No. 43/01
SBC	São Bernardo do Campo
SBCUTPCU/IDB	São Bernardo do Campo Urban Transportation Program Coordination Unit/IDB
SHAMA	Secretaria de Habitação e Meio Ambiente [MSBC Department of Housing and the Environment]

SO	Secretaria de Obras [MSBC Department of Public Works]
SPN	Specific procurement notice
ST	Secretaria de Transporte [MSBC Department of Transportation]
STN	Secretaría del Tesoro Nacional [Federal Treasury Department]





# BRAZIL

## IDB LOANS APPROVED AS OF JUNE 30, 2004

	US\$Thousand	Percent
<b>TOTAL APPROVED</b>	<b>25,847,047</b>	
DISBURSED	22,249,974	86.08 %
UNDISBURSED BALANCE	3,597,073	13.91 %
CANCELATIONS	1,651,434	6.38 %
PRINCIPAL COLLECTED	10,528,522	40.73 %
<b>APPROVED BY FUND</b>		
ORDINARY CAPITAL	24,157,508	93.46 %
FUND FOR SPECIAL OPERATIONS	1,558,025	6.02 %
OTHER FUNDS	131,514	0.50 %
<b>OUTSTANDING DEBT BALANCE</b>	<b>11,721,451</b>	
ORDINARY CAPITAL	11,368,059	96.98 %
FUND FOR SPECIAL OPERATIONS	353,087	3.01 %
OTHER FUNDS	305	0.00 %
<b>APPROVED BY SECTOR</b>		
AGRICULTURE AND FISHERY	1,056,935	4.08 %
INDUSTRY, TOURISM, SCIENCE AND TECHNOLOGY	6,404,858	24.77 %
ENERGY	2,567,998	9.93 %
TRANSPORTATION AND COMMUNICATIONS	4,089,100	15.82 %
EDUCATION	793,332	3.06 %
HEALTH AND SANITATION	3,202,775	12.39 %
ENVIRONMENT	666,912	2.58 %
URBAN DEVELOPMENT	2,697,437	10.43 %
SOCIAL INVESTMENT AND MICROENTERPRISE	2,859,193	11.06 %
REFORM AND PUBLIC SECTOR MODERNIZATION	1,077,932	4.17 %
EXPORT FINANCING	0	0.00 %
PREINVESTMENT AND OTHER	0	0.00 %

\* Net of cancellations with monetary adjustments and export financing loan collections.



# BRAZIL

## STATUS OF LOANS IN EXECUTION AS OF JUNE 30, 2004

(Amount in US\$ thousands)

APPROVAL PERIOD	NUMBER OF LOANS	AMOUNT APPROVED*	AMOUNT DISBURSED	% DISBURSED
<b><u>REGULAR PROGRAM</u></b>				
Before 1998	18	3,653,267	2,896,736	79.29 %
1998 - 1999	11	1,425,000	407,920	28.63 %
2000 - 2001	10	1,023,784	297,244	29.03 %
2002 - 2003	12	910,800	105,932	11.63 %
2004	3	144,617	0	0.00 %
<b><u>PRIVATE SECTOR</u></b>				
2000 - 2001	2	66,100	39,103	59.16 %
2002 - 2003	2	68,900	25,285	36.70 %
2004	2	125,000	0	0.00 %
<b>TOTAL</b>	<b>60</b>	<b>\$7,417,468</b>	<b>\$3,772,220</b>	<b>50.86 %</b>

\* Net of cancellations. Excludes export financing loans.



**Inter-American Development Bank**  
Regional Operations Support Office  
Operational Information Unit

## Brazil

### Tentative Lending Program

#### 2004

Project Number	Project Name	IDB US\$ Millions	Status
<a href="#">BR0375</a>	Urban Transportation Curitiba II	80.0	APPROVED
* <a href="#">BR0411</a>	Unibanco - Infrastructure Credit Facility	50.0	APPROVED
<a href="#">BR0372</a>	São Paulo Fiscal Administration	20.0	APPROVED
* <a href="#">BR0402</a>	Tele Norte Leste Bond Guarantee (Telemar)	68.0	APPROVED
<a href="#">BR0397</a>	Environmental Rehabilitation Belo Horizonte	46.5	APPROVED
* <a href="#">BR1011</a>	Brazilian Infrastructure Investment Fund (BIIF)	75.0	APPROVED
* <a href="#">BR0370</a>	Campos Novos Hydroelectric Power Project	75.0	
<a href="#">BR0302</a>	Fortaleza Urban Transport	85.2	
<a href="#">BR0400</a>	Sao Bernardo do Campo Urban Transportation	72.0	
<a href="#">BR1009</a>	São Paulo: Evaluation and Improvement of Social Policies	5.0	
* <a href="#">BR1014</a>	Construtora Norberto Odebrecht S.A.(CNO) Secured Corporate Bond	20.0	
<a href="#">BR1001</a>	Food and Agriculture Research	36.0	
<a href="#">BR0403</a>	External Control Modernization Program States PROMOEX	38.6	
<a href="#">BR0358</a>	Financing of PYMES - BNDES	1,000.0	
<a href="#">BR0405</a>	States and DF Administration Modernization I - PNAGE	93.0	
<a href="#">BR0396</a>	Env. Rehab. of the Paraibuna River J. de Fora	19.3	
<a href="#">BR1005</a>	Igarapes de Manaus Environmental-Social Prog.	140.0	
<a href="#">BR1004</a>	Support to BOLSA FAMILIA Program	1,000.0	
<b>Total - A : 18 Projects</b>		<b>2,923.6</b>	
<a href="#">BR0392</a>	Cadaster and Land Regularization Program	18.0	
<a href="#">BR0318</a>	Tourism Development South of Brazil (PRODETUR SUL)	200.0	
<a href="#">BR1006</a>	Macambira Anicuns Urban Program	52.0	
* <a href="#">BR0395</a>	Termonorte	59.2	
* <a href="#">BR0412</a>	Braskem	75.0	
* <a href="#">BR1015</a>	Coelba Investment Program	64.8	
* <a href="#">BR1017</a>	Integrated Cogeneration Facility	75.0	
* <a href="#">BR1019</a>	Comgas Investment Program	43.0	
<b>Total - B : 8 Projects</b>		<b>587.0</b>	
<b>TOTAL 2004 : 26 Projects</b>		<b>3,510.6</b>	

#### 2005

Project Number	Project Name	IDB US\$ Millions	Status
<a href="#">BR1008</a>	BH Citizenship: Integrated Development Project	21.0	
<a href="#">BR1013</a>	Ecotourism Development Mata Atlantica, S.Paulo	9.0	
<a href="#">BR0376</a>	Environmental Improvement for Amapa	21.0	
<a href="#">BR0254</a>	Florianopolis-Osorio Highway Moderniz.	322.0	
<a href="#">BR1016</a>	Competitiveness of Clusters São Paulo	10.0	
<a href="#">BR1012</a>	Sustainable Development Semi-Arid in Sergipe	90.0	
<a href="#">BR0390</a>	Porto Alegre Environmental Recovery	75.0	

<a href="#">BR1018</a>	Brasilia Urban Transportation Program	N/A
<a href="#">BR1002</a>	Espirito Santo State Highways	N/A
<a href="#">BR1020</a>	Pernambuco's Clusters Competitiveness	10.0
<a href="#">BR1021</a>	Sustainable Industrial Development of Minas Gerais	10.0

**Total - A : 11 Projects 568.0**

<a href="#">BR0339</a>	Environmental National Fund Support Program 3	21.0
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**Total - B : 1 Projects 21.0**

**TOTAL - 2005 : 12 Projects 589.0**

**Total Private Sector 2004 - 2005 605.0**

**Total Regular Program 2004 - 2005 3,494.6**

**\* Private Sector Project**

# SÃO BERNARDO DO CAMPO URBAN TRANSPORTATION PROGRAM

(BR-0400)

## EXECUTIVE SUMMARY

<b>Borrower:</b>	Município of São Bernardo do Campo (MSBC)		
<b>Guarantor:</b>	Federative Republic of Brazil		
<b>Executing agency:</b>	Município of São Bernardo do Campo (MSBC), through the Urban Transportation Program Coordination Unit (PCU)		
<b>Amount and source:</b>	IDB (OC):	US\$ 72,000,000	
	Local:	US\$ 48,000,000	
	Total:	US\$120,000,000	
<b>Financial terms and conditions:</b>	The interest rate, credit fee, and inspection and supervision fee referred to in this document were established pursuant to document FN-568-3 rev. and may be adjusted by the Board of Executive Directors based on available background data and the corresponding Finance Department recommendation. In no event may the credit fee exceed 0.75% or may the inspection and supervision fee exceed 1%. <sup>1</sup>		
	Amortization period:	20 years	
	Grace period:	6 years	
	Disbursement period:	maximum: 6 years	
		minimum: 3 years	
	Interest rate:	adjustable	
	Inspection and supervision:	0%	
	Credit fee:	0.25%	
	Currency:	Single Currency Facility	
<b>Objectives:</b>	The program’s general objective is to improve the mobility of residents in the município of São Bernardo do Campo by developing an urban transportation system more responsive to their needs, giving priority to mass transit and pedestrian traffic, with the focus on road safety and urban integration.		

<sup>1</sup> In no event may the inspection and supervision fee collected in any given six-month period exceed 1% of the loan amount divided by the number of six-month periods in the original disbursement period.

<b>Description:</b>	<p>The specific components of the program are as follows: (i) engineering studies and administrative costs; (ii) upgrading of the mass transit system; (iii) beltway and connection with municipal highways; (iv) improvements in road safety; (v) modernization of the traffic signal system; (vi) environmental supervision and supervision of program works; (vii) institutional strengthening and management development in the transportation, public works and environmental areas; and (viii) associated costs, including expropriation, resettlement and environmental mitigation, and compensation costs.</p>
<b>The Bank's country and sector strategy:</b>	<p>The proposed program is consistent with the Bank's strategy with Brazil, as defined in the country paper. This strategy focuses on four areas: (i) productivity and infrastructure; (ii) poverty and equity; (iii) living conditions and efficiency in cities; and (iv) modernization of the State. In addition, the Bank has assigned priority to other cross-cutting issues such as integration, the environment, and reducing regional, gender, and racial inequalities. In line with this strategy, the proposed program is designed to develop a more efficient and equitable urban transportation system by modernizing physical infrastructure and upgrading the mass transit system. Improving the mobility of local residents and access to social services and employment and production centers should strengthen the competitiveness of the municipio of São Bernardo do Campo. The program component designed to upgrade the mass transit system will benefit primarily low-income residents and persons with physical disabilities, fostering social equity. The alleviation of traffic congestion problems will help mitigate the environmental impacts of the transportation system, particularly its effects on air quality. The activities under the institutional strengthening component will help promote modernization of the State.</p>
<b>Experience and coordination with other financial institutions:</b>	<p>The Bank has no experience working directly with the MSBC. Nor does the MSBC have any direct experience working with other multilateral lending agencies. However, the MSBC has been indirectly involved in two ongoing Bank programs, the Low-Income Neighborhood Improvement Program financed by loan 1126/OC-BR, with the Ministry of the City as its executing agency, and the National Program to Support the Administrative and Fiscal Management of Brazilian Municipalities, financed by loan 1194/OC-BR and executed by the Ministry of Finance. Its involvement in both these programs has given the MSBC some experience with Bank procurement and disbursement procedures and its performance in both programs has been impressive (paragraph 1.14).</p>

**Environmental and social review:**

Given their nature, environmental permits will be required for the program works envisaged. In compliance with environmental legislation and Bank policy, the MSBC drew up a preliminary environmental impact assessment, an environmental impact assessment and corresponding environmental impact report (EIA/EIR), a basic environmental project (BEP), and an environmental management plan (EMP). The preliminary EIA established that: (i) from a socioenvironmental standpoint, the program would improve current conditions in the project area; and (ii) any potential adverse environmental effects of scheduled works are minor and foreseeable and can be mitigated by the measures included in corresponding projects. The program includes provisions for adequately addressing socioenvironmental issues to lessen the impact of project works, a proposal for remedying critical environmental liabilities and provisions for the transportation of hazardous materials and the mitigation of problems engendered by the involuntary resettlement of local residents, which will be carried out in accordance with Bank policy OP-710. It also includes provisions for furnishing the MSBC with appropriate tools for efficiently discharging its responsibilities in this area on a continuing basis and for strengthening its environmental management capacity. The MSBC has held public hearings with impacted communities and other entities concerned and will continue to do so throughout the preparatory phase of projects not included in the representative sample. The respective documents were published on 26 November 2003 by the Bank's Public Information Center (PIC) in compliance with prescribed deadlines. The environmental impact report was examined by the Committee on Environment and Social Impact (CESI) on February 27, 2004.

**Benefits:**

The main expected benefits of the proposed program are: (i) savings in terms of travel time and transportation costs; (ii) improved access for pedestrians, cyclists and persons with disabilities; (iii) a lower risk of traffic accidents; (iv) improvements in road connectivity and urban integration for different parts of the municipio; (v) shorter travel times and better service coverage by the bus rapid transit system; and (vi) reductions in air pollution levels.

**Risks:**

The program poses no special risks (paragraph 4.24). However, with municipal government elections scheduled to be held in 2004, there is the risk of a change in the city government, which could affect program implementation. This risk is mitigated by the current interest in the program on the part of urban transport system users and operators (stakeholders) since, with the various promotional and information activities conducted to date, the public has been made aware of its benefits and will demand that it be pursued. The hiring of a management support firm further ensures its continuity.

**Special contractual clauses:**

**(1) The conditions precedent to the first disbursement of program funding** (paragraph 3.37) **are:** (i) the entry into effect of agreements between the MSBC and the municipios of Diadema, Santo André, and São Caetano do Sul for the construction of scheduled works within their jurisdiction; and (ii) the hiring of a firm to assist the PCU with program management and environmental management activities based on terms of reference previously agreed on with the Bank. **(2) The conditions precedent to initiation of the works for the km 17 interchange with Via Anchieta** (paragraph 3.38) **are:** the completion and submission to the Bank of the detailed studies, designs and terms of reference for project works and procurement for interventions under the road safety component and the traffic signal system upgrading component. **(3) The conditions precedent to initiation of the works for connection of Avenida Lauro Gomes, Avenida Taboao, and Avenida Rudge Ramos and the downtown/Rudge Ramos interchange** (paragraph 3.39): (i) start-up of the Department of Transportation, with the staff and resources agreed on with the Bank; (ii) the conclusion of the contract award phase of the bidding on the SBC urban transport master plan; (iii) the conclusion of the contract award phase of the bidding on hazardous loads master plan; and (iv) the conclusion of training activities for the technical staff of the Department of Transportation, Department of Public Works, and Department of Housing and the Environment. **(4) The conditions precedent to the commencement of any program works** (paragraph 3.40) **are:** (i) in the case of works requiring resettlement, the submission of evidence of implementation, in full, of the expropriation and resettlement plan for the stretch or section of works in question; and (ii) an environmental installation permit for such works.

**Poverty-targeting and social sector classification:**

This operation does not qualify as a social equity enhancing program as described in the indicative targets mandated by the Bank's Eighth Replenishment (document AB-1704). Furthermore, this operation does not qualify as a poverty-targeted investment (PTI).

**Exceptions to Bank policy:**

None.

**Procurement:**

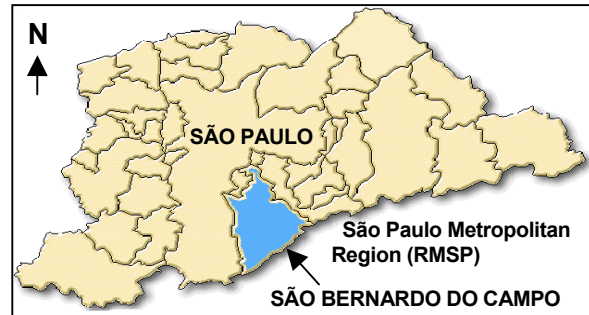
Contracts for works and services will be awarded and goods and consulting services will be procured in accordance with Bank procedures. International competitive bidding will be required for contracts for program works valued at or above US\$5,000,000, for goods valued at or above US\$350,000, and for consulting services valued at or above US\$200,000 (paragraph 3.29).



## I. FRAME OF REFERENCE

### A. Geographic and socioeconomic setting

- 1.1 The municipio of São Bernardo do Campo (SBC) covers an area of 406 square kilometers and has a population of over 700,000 inhabitants. It is located on the outskirts of the São Paulo Metropolitan Region (RMSP),<sup>1</sup> southeast of the city of São Paulo, in what is commonly known as the “ABCD” area (consisting of the municipios of Santo André, São Bernardo do Campo, São Caetano do Sul, and Diadema). SBC lies on the corridor between São Paulo and the Port of Santos,<sup>2</sup> 18 kilometers from São Paulo, the state capital, and 45 kilometers from the aforesaid major port. Living conditions in the municipio are good, with high social indicators in the health, education, sanitation and public safety areas and a large middle class, reflecting a social structure with fewer inequities than generally found in most other parts of Brazil.



- 1.2 São Bernardo do Campo has played a strategic role in the Brazilian economy for many years as one of the country's major industrial centers, with a strong presence by different types of industries such as auto-making, metal/engineering, plastics, food processing, electronics, apparel, furniture, textiles, chemical/petrochemical and equipment. SBC has 1,500 plus factories, 3,400 commercial establishments and close to 4,100 service companies whose output contributes 4% of the nation's GDP. SBC has a workforce of 200,000 workers, half of whom are employed in industrial enterprises. São Bernardo's position as the nerve center for the entire region makes its own economic and urban growth crucial to the economic stability and continued competitiveness of the ABCD area and of the entire São Paulo Metropolitan Region.

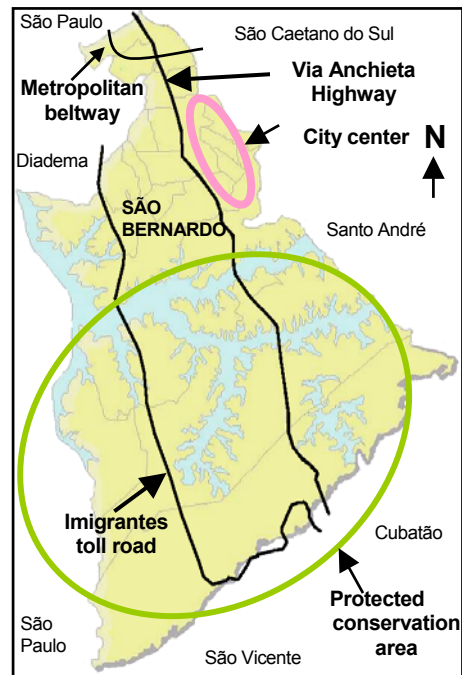
### B. Urban setting, population and transportation demand

- 1.3 São Bernardo do Campo was founded 450 years ago as a rest stop for travelers between São Paulo and the Atlantic Coast. The municipio of São Bernardo do Campo (MSBC) was officially established in 1889. While São Bernardo was always an important business center, it was in 1948, with the establishment of the

<sup>1</sup> The RMSP encompasses 39 municipalities with a total population of 18 million inhabitants. Together with the Port of Santos, the RMSP, also known as the Greater São Paulo Area, is the largest industrial, financial and service center in Brazil, as well as in all of South America.

<sup>2</sup> The corridor has two highways, Via Anchieta and the “Imigrantes” toll road was expanded to a four-lane highway by EcoVias, the highway concession holder, with Bank financing (1232/OC-BR).

first auto-making plants in São Bernardo for strategic reasons (the proximity of the Port of Santos) that the município's economic growth really took off, further heightening its region-wide importance. This economic boom and its region-wide import are responsible for the steady urban and population growth reported by the município, whose population increased more than fifteen-fold between 1950 and 2003, from 45,000 to over 700,000 inhabitants, with 98.3% living within the city limits. Its geographic position and the Via Anchieta Highway corridor crossing through the MSBC from north to south have cut the city into two major physically and functionally separate sectors (the eastern and western sectors). The Via Anchieta Highway is an essential link in the regional transportation network connecting the RMSP with the port of Santos. Being as it is a restricted-access highway, there are very few road connections between the município's eastern and western sectors, which is responsible for the highly unbalanced pattern of urban growth in both parts of the city and is creating extremely heavy traffic pressure on the few existing interchanges along the Via Anchieta Highway connecting the eastern and western sectors. The eastern sector (which includes the city center) has a densely networked road system and, with the large concentration of business in this area, high levels of traffic congestion during peak hours. The western sector, which has most of the undeveloped land for the city's future growth, has a scattered road network. However, there are already visible signs of congestion due to the growth of business and industry in this area, with all buildable sites in the eastern sector already developed and the lack of a proper road network allowing for a better distribution of vehicular traffic. These factors are impeding the sound development of buildable areas within the western sector of the município and more efficient and profitable patterns of urban land use.



- 1.4 In the past few years, the socioeconomic dynamics of São Bernardo do Campo have become more diversified with the presence of many other types of activities in addition to industry in the wake of the growth in business, tourism, services and education activities. This diversification has heightened local transportation demand while, at the same time, increasing traffic flows from neighboring municípios, with SBC operating as a regional development hub. The total average daily number of trips in private vehicles and public transportation in SBC is over 1.2 million, with a current per capita vehicle ownership rate of roughly 0.43, compared with the average per capita vehicle ownership rate in Brazil of 0.11. The size of the fleet of registered vehicles in the MSBC grew at an average annual rate of approximately 7% throughout the 1990s.

- 1.5 Its geographic location and region-wide import and local urban growth in SBC are generating various types of extremely high-density traffic affecting the municipio, namely interregional, long-distance through traffic on the Via Anchieta Highway between the RMSP and the Port of Santos, regional long-distance through traffic within the RMSP, regional medium-distance traffic within the ABCD area, and local traffic within the MSBC. The share of regional and interregional traffic versus local traffic in long-distance traffic corridors (the Via Anchieta Highway and metropolitan beltway) and the resulting competition for the use of highway infrastructure have created serious problems impeding local travel by residents of SBC, which are undermining the urban and economic growth and general competitiveness of the entire region, given the strategic role played by the MSBC within the RMSP (paragraph 1.3).

## **C. Transportation infrastructure**

### **1. Management**

- 1.6 The MSBC is the sole authority responsible for all aspects of the operation of the city transportation system, including traffic management and control, road safety, local public transportation service and the construction and maintenance of road infrastructure. The municipal government manages the transportation system through administrative agencies referred to as “secretarias” (departments), which, in turn, are divided into departments and sections. From an institutional standpoint, one of the serious logistical problems faced by the MSBC is that certain interrelated tasks such as transportation planning and traffic control, for example, are performed by different departments, which hinders effective coordination and precludes a holistic approach to transportation problems.

### **2. Road infrastructure**

- 1.7 As indicated earlier (paragraph 1.5), existing road infrastructure in SBC must accommodate four types of traffic. As things stand, high-density interregional and regional vehicular traffic is seriously impeding the use of existing road infrastructure for local travel within the municipio. Road connections between the eastern and western sectors of the municipio are few and far between with the limited number of crossings on the Via Anchieta Highway (paragraph 1.3), which is creating environmental and city planning problems due to factors such as traffic congestion on the few existing highway crossings, pedestrian access and mobility problems and inefficient public transportation service with unnecessarily long routes.

### **3. Mass transit**

- 1.8 The mass transit system in SBC consists of two completely separate types of service, municipal and intercity service. There is also the São Paulo Metro system, although there is no direct Metro service within the MSBC and no medium-term

plans to extend the Metro system to this area. Intercity public transit services with region-wide coverage are operated by the Empresa Metropolitana de Transportes Urbanos de São Paulo (EMTU) [São Paulo Metropolitan Urban Transportation Company] over which the MSBC has no administrative authority. As part of the EMTU metropolitan area network, SBC is on the São Mateus-Jabaquara metro route served by trolleybuses and conventional buses giving riders remote access to the São Paulo Metro system. The level of service quality is good and service operation is unaffected by current traffic congestion problems in SBC, since the buses travel in dedicated lanes in roadway median areas (canaletas) and have traffic signal priority at controlled intersections. The SBC municipal mass transit system is operated under a concession by a private firm known as "Consortio SBCTrans", which carries an average of 190,000 passengers a day. The concession was granted in 1998 for a 15-year period and may be extended for up to 20 years. The MSBC Department of Urban Services and the Empresa de Transporte Coletivo de São Bernardo (ETC) [São Bernardo Public Transportation Company], a government enterprise, are in charge of all other system management services (paragraph 3.4). ETC is responsible for system planning and administering the concession agreement.

- 1.9 The São Bernardo municipal mass transit system has a fleet of 325 buses servicing 54 routes connecting the different districts of the município with the city center. Since the city center is located on the east side of the Via Anchieta Highway (a restricted-access highway), most bus routes from the western sector of the city are unnecessarily long to allow for the buses to cross the Via Anchieta Highway at the few available highway crossings and enter or leave the downtown area. Travel times on bus routes within the eastern sector, which do not need to cross the Via Anchieta Highway, are also unduly long, since these routes have no dedicated bus lanes or other advantages giving public buses any sort of priority on congested roadways. Moreover, with the lack of road infrastructure in the western sector of the city, there are no local routes running north to south effectively connecting different parts of this area, jeopardizing future urban development prospects in this part of the município. Although all bus lines in the municipal mass transit system are operated by the same enterprise, they do not function as an integrated network of trunk routes or similar type of public transportation network. Each route simply connects a series of districts with the city center. Nor is there any type of transfer terminal at the ends of bus routes or any type of integrated fare system for city transportation services.

#### **4. Traffic control**

- 1.10 São Bernardo currently has traffic signals installed at 320 intersections. All such traffic signals are stand-alone units with no centralized control system. Some have electromechanical mechanisms. The lack of a centralized control system precludes optimization of the use of existing road infrastructure by private vehicles or any improvement in the operation of the mass transit system by synchronizing traffic lights at the micronetwork or general network level. The characteristics of existing

traffic signals are such that, right now, there is very little that can be done to improve traffic conditions in already highly congested areas of the eastern sector of the city or in certain areas of the western sector, where the lack of a good road network is creating extremely high traffic volumes on certain roadways and at certain intersections.

## 5. Road safety and universal access

- 1.11 As far as road safety is concerned, the MSBC currently has a rather good real-time traffic control and traffic accident monitoring program in place at strategic locations. It also has an innovative road safety education subprogram for students. This program has helped dramatically to cut down the number of traffic accidents in the past few years, particularly since 1998, which marked the beginning of the “municipalization” of public transportation services. However, the drop in the total number of fatalities is still not on a par with the reduction in the total number of traffic accidents. The social cost of traffic accidents is currently estimated at just under US\$10 million a year. SBC still has certain institutional weaknesses in road safety-related areas, particularly with respect to coordination between different administrative units, manpower training and the systematic identification of critical situations or sites presenting road safety problems. The high volume of vehicular traffic in areas along interregional and metropolitan traffic corridors has made it necessary to expand pedestrian facilities to help counter the effects of the physical segregation of such areas by these highway corridors. Since the program is expected to speed up the flow of traffic, it could further aggravate problems engendered by the physical segregation of such areas unless appropriate mitigation measures are taken to counteract this effect. Accordingly, the volume of pedestrian traffic on both sides of these traffic corridors justifies an expansion in cycling and pedestrian infrastructure. Moreover, there is a good opportunity here to further improve access for individuals with physical disabilities at a relatively low cost and to encourage bicycle travel under safer conditions.

Year	Fleet	Population	Accidents	Fatalities
1994	217,662	597,220	9,800	37
1995	258,523	629,170	11,259	95
1996	288,054	658,791	11,587	142
1997	297,745	683,711	12,076	128
1998	305,246	701,975	11,143	112
1999	307,000	703,351	7,374	98

### D. Institutional framework of the urban transportation sector

- 1.12 The município of São Bernardo do Campo (MSBC) is an administrative subdivision of the Federative Republic of Brazil and an integral part of the State of São Paulo. It is a legally incorporated body under Brazilian public law, with administrative, operational and financial autonomy and independent assets. Its organizational structure, powers and functions are established in its charter (*Lei Orgânica*). It is headed up by a mayor and city council (*Câmara Municipal*), with 14 “secretarias” or administrative departments. As of the end of 2002, it had a

workforce of just under 11,000 active employees,<sup>3</sup> with plans to gradually downsize at a rate of 2% to 3% a year as workers retire and certain operational functions are privatized. For decades, all maintenance and construction work and most studies and projects in São Bernardo have been outsourced to private firms, gradually eliminating the cumbersome contracting procedures characteristic of government procurement. The MSBC has demonstrated that it has the technical, administrative and financial capability to contract out works and services to private firms and oversee their performance.

#### **E. The Bank's sector strategy**

- 1.13 The proposed program is consistent with the Bank's strategy for Brazil, as defined in the country programming paper. The Bank's country strategy, reflecting the "Brazil for All" multiyear plan, focuses on the following four areas of activity: (i) productivity and infrastructure; (ii) poverty, equity, and human capital formation; (iii) living conditions and efficiency in cities, integrating activities to fight urban poverty, efficiency, and environmental quality in cities; and (iv) institutional strengthening and modernization of the State, with emphasis on subnational governments. In addition to these four priority areas, the Bank is stressing certain crosscutting issues that concern a number if not all the strategic areas of activity, notably the environment. In line with this strategy, the proposed program is designed to develop a more efficient and equitable urban transportation system by modernizing physical infrastructure and upgrading the mass transit system. Improving the mobility of area residents and access to social services and employment and production centers should strengthen the competitiveness of the municipio of São Bernardo do Campo. The program component designed to upgrade the mass transit system will benefit primarily low-income residents and persons with physical disabilities, fostering social equity. The alleviation of traffic congestion problems will help mitigate the environmental impacts of the transportation system, particularly its effects on air quality. The program will help promote modernization of the State through the institutional strengthening component.

#### **F. Experience of the Bank and other lending agencies**

- 1.14 The Bank has no direct experience with the MSBC. Nor does the MSBC have any direct experience working with other multilateral lending agencies. However, the MSBC has been indirectly involved in two ongoing Bank programs, a Low-Income Neighborhood Improvement Program financed by Loan 1126/OC-BR, with the Ministry of the City as its executing agency, and a National Program to Support the Administrative and Fiscal Management of Brazilian Municipalities, financed by Loan 1194/OC-BR and executed by the Ministry of Finance. Its involvement in

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<sup>3</sup> This includes all members of the Legislature and City Attorney's Office, as well as Executive Department employees in the social services area, whose health and education personnel, alone, account for just over 50% of this figure.

both these programs has given the MSBC some experience with Bank procurement and disbursement procedures and its performance in both programs has been impressive. The Bank, itself, has experience with the implementation of urban transportation programs in a number of countries. Specifically, it has already carried out urban transportation programs in Brazil, two in Curitiba and another in São Paulo. Also, another operation is in the pipeline, the Fortaleza Urban Transportation Program (BR-0302). All this experience have given it insights, which were drawn on for this program.

#### **G. Lessons learned from previous urban transportation programs**

- 1.15 There are a number of lessons which have been incorporated into the proposed program drawn on the Bank's previous experience with other urban transportation programs and other transportation sector loans to Brazil, namely: (i) the need to ensure timely counterpart funding to minimize the risk of delays in program implementation; (ii) the need for the program design to make public transit the main focal point for the implementation of all envisaged interventions to avoid expensive, isolated approaches, which often turn out to be ineffective and encourage the use of other less efficient modes of transportation; (iii) the need for program recipients to include users of nonmotorized modes of transportation (pedestrians, cyclists and the disabled) and for the program to include provisions for improving road safety as part of an integrated approach to the solution of urban transportation system problems; (iv) the need to involve all stakeholders in program design work, so that the viewpoints of all segments of society are considered in the discussion process, and to help foster a sense of ownership with respect to the program per se and corresponding activities on the part of direct service users and operators as well as the general public; and (v) the importance of the program including a component to ensure its long-term institutional sustainability far beyond the end of the program implementation period.

#### **H. Value added of Bank involvement**

- 1.16 The Bank's continual presence throughout the program preparation phase helped improve significantly the project design compared with the original proposal presented by the MSBC. The investments initially proposed were thus reduced, reflecting the optimization achieved, while maintaining the expected effectiveness of the program according to its initial objectives. The Bank's involvement also helped expand the program to include components addressing mass transit, road safety, pedestrian and cyclist issues and universal access for persons with physical disabilities. The analytical methods proposed by the Bank for program preparation purposes helped furnish the MSBC with cutting-edge technology-based tools in the transportation area including demand forecasting models for urban transportation services, as well as microscopic traffic simulation models, which were used for the first time ever in Brazil as part of this operation. Rapid transfers of technology made it possible to get the most out of these tools, helping to rule out a number of high-cost interventions that were proven to be ineffective or to have only a limited

local impact and to solve a number of problems with least-cost alternatives. Another benefit of the Bank's involvement was the development of a more integrated approach to upgrading the municipal mass transit system. The program includes an institutional strengthening component designed specifically to continue and sustain the technology transfer process begun during the program preparation phase. This should endow the MSBC with the installed capacity for short-, medium- and long-range planning and management of its public transportation and mass transit system.



## **II. PROGRAM**

### **A. Objectives and description**

- 2.1 The program's general objective is to improve the mobility of residents in the municipio of São Bernardo do Campo by developing an urban transportation system more responsive to their needs, giving priority to mass transit and pedestrian traffic, with the focus on road safety and urban integration.
- 2.2 The program will give residents of SBC a more efficient (shorter travel times, lower operating costs, greater safety and better environmental conditions) and more equitable (a more modern mass transit system with good service coverage, affordable to low-income residents) urban transportation system that will ensure sustainable future urban development of the municipal area of influence.
- 2.3 The program's specific objectives are: (i) to shorten travel times for different modes of transportation; (ii) to lower motor vehicle operating costs; (iii) to reduce the number of traffic accident victims; (iv) to improve access for persons with disabilities; (v) to improve connectivity and urban integration in different parts of the municipio; (vi) to broaden the coverage of the bus rapid transit system and shorten corresponding travel times; and (vii) to reduce air and noise pollution.

### **B. Scaling of the program**

- 2.4 MSBC experts used urban transportation demand forecasting models to conduct studies to establish the scale of the operation and buttress decision-making processes. The models were calibrated based on RMSP data bases used by the EMTU for planning mass transit system routes. Microscopic traffic simulation models were used to conduct studies to establish the operational viability and overall effect of the various proposed approaches and to gauge the benefits of each envisaged intervention. The findings from these studies were used as the basis for economic appraisals of the different scenarios examined in order to select the interventions to be included in the program, considering the respective budgetary constraints. This method helped formulate an integrated approach to the implementation of municipal mass transit system interventions and rule out inefficient works, resolving a number of problems with least-cost alternatives. To ensure the continuity of this endeavor, the program includes funding for the formulation of a master urban transportation plan, hopefully, to serve as a basis for identifying other necessary medium- and long-term works and interventions. The combination of this master plan and envisaged activities under the institutional strengthening component should help ensure the sound long-term management of the SBC urban transportation system and its inclusion in envisioned long-term projects for the São Paulo Metropolitan Region.

## **C. Program structure**

- 2.5 The specific components of the program are as follows: (i) engineering studies and administrative expenses; (ii) upgrading of the mass transit system; (iii) beltway and municipal road integration; (iv) improvements in road safety; (v) upgrading of the traffic signal system; (vi) supervision of program works; (vii) institutional strengthening and management development in the transportation, public works and environmental areas; and (viii) associated costs, including expropriation, resettlement, and environmental mitigation and compensation costs.

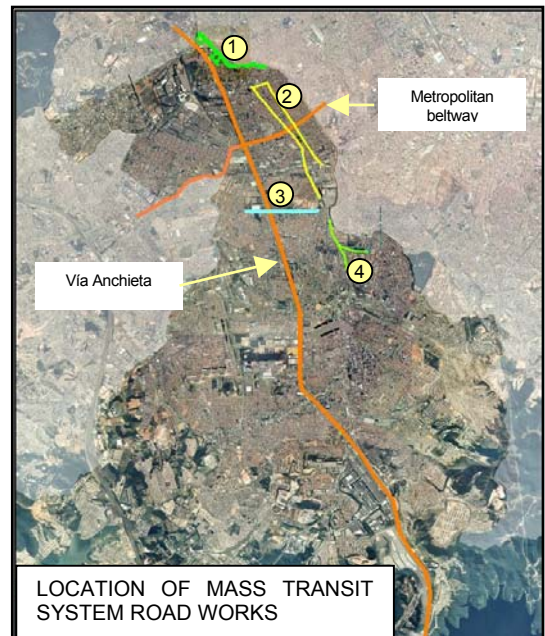
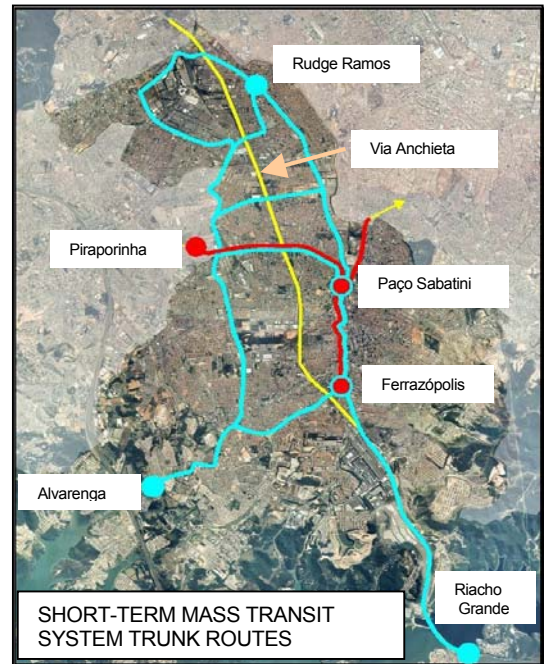
### **1. Engineering studies and administrative expenses (US\$4.3 million)**

- 2.6 This component covers (i) the cost of required engineering studies throughout the program implementation period, including adjustment of final designs, functional, geometric and structural designs, (ii) logistical costs associated with the Urban Transportation Program Coordination Unit (PCU), the MSBC unit in charge of program implementation; (iii) the cost of hiring a consulting firm to furnish the PCU with management support services throughout the program implementation period, including expenses for environmental management of the program, environmental supervision of the works, measurement of the baseline indicators and a midterm review; and (iv) the cost of hiring an independent firm to conduct program audits. Environmental supervision activities will ensure strict compliance with program environmental specifications and oversee the work of construction firms to establish necessary measures for addressing any unforeseen socioenvironmental problems.

### **2. Upgrading of the mass transit system (US\$38.8 million)**

- 2.7 The SBC's main problem from an urban development perspective lies in the development constraints engendered by mobility problems impeding local travel by residents of the municipio (paragraphs 1.3 and 1.5). Virtually all users of the two main modes of transportation, public and private transportation, are having trouble getting around the municipio. This program component includes all activities and interventions designed to improve the operating conditions of the mass transit system with a view to raising its capacity threshold, expanding its coverage, boosting its level of service, and lowering its operating costs (paragraph 1.9). This approach should strengthen the operating platform for the mass transit system to increase its passenger-carrying capacity, help promote a more balanced pattern of urban development throughout the municipio from a long-range perspective and strengthen the viability of its future integration into the metropolitan area mass transit system. This means building new infrastructure to facilitate the integration of city bus routes, establishing dedicated lanes enabling public buses to operate at higher speeds and integration terminals for streamlining service and facilitating future integration with the intercity system.

- 2.8 Specific activities with respect to the mass transit system include: (i) changes in the layout of bus routes to enable public buses to take advantage of improvements in connections as a result of various road infrastructure works; (ii) the establishment of new bus routes to take advantage of improvements in road connectivity in the western sector of the municipio; (iii) the construction of transfer terminals to lay the groundwork for the future upgrading and integration of mass transit services based on a network of trunk and feeder routes with dedicated or priority lanes for public transportation vehicles; and (iv) road works for the establishment of dedicated lanes on trunk routes. These road works for public transportation are located at four different sites in the municipio and involve the widening of road surfaces (interventions 1, 2, 3, and 4), the doubling of the capacity of roads (interventions 1 and 2), a tunnel (intervention 3) and two viaducts (intervention 2) for a total of 10.28 linear kilometers of roadways. This phased system integration process includes the construction of two integration terminals for the municipal mass transit system (in Alvarenga and Rudge Ramos). Intervention 1, located in the northern part of the municipio, will be crucial, not only for operation of public transportation and the Rudge Ramos terminal, but also to complete the northern section of the beltway. Intervention 2 will help develop the main trunk road for public transportation (with a dedicated lane), through the downtown area. Intervention 4 will expand this main trunk road to the south of the municipio, Intervention 3 will allow a trunk road to link the eastern and western sectors of the city, crossing Via Anchieta through a tunnel.

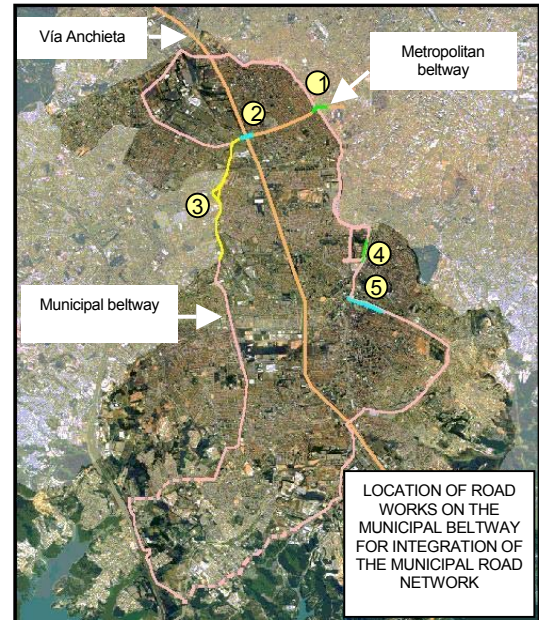


### 3. Beltway and integration of the municipal road network (US\$48.5 million)

- 2.9 As in the case of the mass transit system, the conditions faced by travelers using private transportation clearly reflect a number of problems impacting directly on the urban development of SBC (paragraphs 1.3 and 1.5), such as few road connections between the eastern and western sectors of the municipio due to the limited number of Via Anchieta Highway crossings and high volumes of metropolitan region and

interregional traffic creating congestion on local roadways. Accordingly, as far as road infrastructure is concerned, SBC clearly needs to expand and improve Via Anchieta Highway crossings to reduce travel costs (in terms of travel time and operating costs) between the eastern and western sectors of the municipio. It also needs to improve road connectivity within the eastern and western sectors to reduce travel time and operating costs for local travel and help facilitate future development efforts in the western sector (paragraphs 1.5 and 1.7). To meet these needs for road infrastructure, interventions will be carried out specifically targeting the above-described problems.

- 2.10 The Via Anchieta Highway projects are designed to improve connectivity between the eastern and western sectors of the city for a more balanced distribution of city traffic and to speed up public transportation service in the short term and, over the long term, to help promote efficient, diversified patterns of urban land use throughout the municipio. This package of works includes two road infrastructure projects at kilometers 16 and 17 of the Via Anchieta Highway (in the northern part of the municipio). The intervention at kilometer 17 (see number 3 in the map of the location of road works for public transportation) will also play an important part in public transportation, since it will allow the operation of one of the trunk roads linking the eastern and western sectors.



- 2.11 The objectives of the five interventions included as part of the beltway and municipal highway integration will including completing the beltway and speeding up traffic in the metropolitan area, thereby absorbing a large part of the metropolitan and interregional traffic currently going through SBC and diverting it from the city center and local roads (paragraph 1.5). The works will consist of the construction of new stretches of road (intervention 3), widening of two intersections (interventions 1 and 2), and doubling of the current two-lane roads (interventions 4 and 5), various flood control works (intervention 3), and the construction of two viaducts (interventions 1 and 2), for a total of 8.66 kilometers of road works. Intervention 1 is designed to separate regional traffic from metropolitan and local traffic in a sector where the two traffic flows converge. Intention 2 will help speed up regional and metropolitan traffic by diverting traffic around SBC at the intersection with Via Anchieta Highway. Intervention 3 will expand the beltway to separate through traffic (regional and metropolitan) from local traffic, and to establish a trunk road for public transportation. It will also help development the western sector. Interventions 4 and 5 will continue the beltway close to the city center, thereby preventing through traffic from using local roads in a sector that is already quite congested.

#### **4. Improvements in road safety (US\$4.3 million)**

- 2.12 Envisaged interventions under this component are designed to further reduce the number of major traffic accidents in SBC (paragraph 1.11), as well as the number of traffic fatalities and related social costs. This component seeks to better protect pedestrians and cyclists and speed up the flow of vehicular traffic and public transportation service in general. It also addresses the need to improve and expand pedestrian infrastructure, with the faster-moving traffic as a result of envisaged road infrastructure works (paragraph 2.10) likely to further hinder urban integration in districts adjacent to interregional and metropolitan highway corridors providing even higher levels of service after the program is completed. Activities under this subcomponent target critical points of the road network to be singled out through a road safety audit that will be funded by the program. Scheduled interventions include sidewalk improvement works, the construction of pedestrian overpasses and disabled access ramps at intersections and on sidewalks and overpasses, the reinforcement and amelioration of pavement markings and road signs, the installation of electronic speed control devices, the installation of traffic signals at pedestrian crossings, the establishment of bicycle lanes and minor geometric improvements. The budgets and designs for all program infrastructure works in these subcomponents provide for necessary pavement markings, traffic signs and control devices to ensure an adequate level of road safety for all system users.

#### **5. Upgrading of the traffic signal system (US\$3.5 million)**

- 2.13 As far as traffic operating conditions are concerned, SBC needs to improve the functioning of its traffic signal system to optimize the use of road infrastructure already in place and scheduled to be constructed as part of the program and to help speed up public transportation service in high-traffic areas. This component provides for the installation of an intelligent traffic signal system. With the exception of the metropolitan mass transit corridor (*canaleta*) in São Bernardo, all other traffic signals in the municipio operate as stand-alone devices. Efforts to integrate and improve the operation of the traffic signal system will involve the installation of area traffic control systems, including the upgrading of 65 traffic signal controllers with real-time sensors for both vehicular and pedestrian traffic. In addition, integrated traffic monitoring equipment will be installed at strategic locations.

#### **6. Supervision of program works (US\$2.5 million)**

- 2.14 All program works will be supervised by an outside consulting firm to ensure strict compliance with work schedules, designs and technical specifications and standards. Separate contractors will be hired for environmental supervision of construction work and technical supervision of engineering work to guarantee that environmental supervision is independent and its relative importance is assured.



## **7. Institutional strengthening (US\$2.8 million)**

- 2.15 To ensure proper transportation management, the SBC municipal government needs to strengthen its technical capabilities in three basic areas. At the *organizational* level, it needs to develop a more integrated management system for different transportation modes and areas. At the *equipment* level, it needs new hardware and software for better forward-looking transportation planning, simulation and management. At the *operational* level, it needs to standardize existing operating protocols to better manage different transportation factors and to formulate a sound long-term development approach. This component includes four main types of activities in response to these needs: (i) institutional restructuring of the PMSBC (São Bernardo do Campo Mayor's Office), including the creation of a Department of Transportation (ST); (ii) strengthening of technology infrastructure; (iii) establishment of a technical training plan; and (iv) strengthening of institutional policies and regulations in technical transportation, road safety and environment-related areas. The latter three series of activities are designed specifically to strengthen three MSBC departments, namely the Department of Transportation (to be created as part of the program), the Department of Public Works (SO) and the Department of Housing and the Environment (SHAMA).
- 2.16 MSBC organizational requirements include better coordination and a more integrated management of the different transportation modes and areas. Right now, the units in charge of traffic management, urban transportation planning, the mass transit system, road construction and maintenance, traffic signs, traffic control and road safety are attached to three different departments. Accordingly, the program will establish a Department of Transportation to consolidate these currently scattered functions. This reorganization process will be limited to moving existing departments and units under the aegis of a single authority and will create a maximum of two new professional staff positions. It will be implemented as part of a previously planned reorganization effort by the PMSBC and, as such, will not increase the number of offices. The PMSBC has been quite successful in its previous reorganization efforts and has never encountered any major problems. Accordingly, the proposed restructuring process is not expected to have any negative impacts.
- 2.17 Envisaged improvements in technology infrastructure include the procurement of computer hardware, supporting electronic equipment and specialized software packages to strengthen current planning, management, and oversight capabilities in different transportation-related areas. Procurement costs of hardware and software include the cost of related training for personnel.
- 2.18 The training plan includes a series of technical courses and training activities addressing different facets of transportation planning, service operation and oversight, as well as a number of environmental issues. The goal of the training plan is to strengthen the technical know-how of MSBC personnel in all transportation, road safety and environmental areas to ensure a high enough level of

technical expertise for proper long-term system management, operation, and maintenance. Technical courses are essential for two main reasons: first, to ensure that the PMSBC has trained technical staff for those areas in which it is currently showing some degree of weakness and, secondly, to strengthen the integration of different transportation-related areas through the consolidation of information and knowledge in such areas.

- 2.19 It is extremely important to reinforce institutional technical policies and regulations in transportation and environment for the cohesiveness of PMSBC operations in these areas based on long-term municipal development guidelines to ensure that the city maintains its region-wide and metropolitan prominence while providing a people-friendly urban environment for local residents. In practice, institutional policies and regulations translate into standardized protocols helping to manage different transportation factors at play in the municipio in a more organized and coherent manner. The program includes provisions for the development of specific regulatory manuals and technical plans underpinning these protocols on a sound technical footing. Such plans include a master urban transportation plan for São Bernardo do Campo, a master transportation plan for hazardous loads, an environmental liabilities study and a monitoring plan for traffic-generating areas. The regulatory manuals to be developed as part of the program include a manual for the construction and supervision of public works and a quality control manual for road works. Efforts to develop the master urban transportation plan will not get under way until several months after the start-up of program activities, since it is better to perform the analyses required for the formulation of such a plan once certain program works are already operational, so that the positive effects of these interventions can be considered before turning to long-term proposals.

## **8. Associated costs (US\$15,4 million)**

- 2.20 This component covers the cost of acquiring rights of way to property expropriated for purposes of building new stretches of road, widening existing roadways or realigning existing streets. It also covers environmental compensation and resettlement costs.

### **D. Cost and financing**

- 2.21 A breakdown of estimated program costs by component and Financing Structure is presented in Table 1.

Table 1. Program budget, by component (US\$000)						
Budget item	TOTAL	IDB	%	MSBC	%	%Total
<b>1. Engineering work and management</b>	<b>4,266</b>	<b>2,560</b>	<b>60.0</b>	<b>1,706</b>	<b>40.0</b>	<b>3.5</b>
1.1. Studies and design work	135	81	60.0	54	40.0	0.1
1.2. Program management	3,780	2,268	60.0	1,512	40.0	3.2
1.3. Independent audit of the program	351	211	60.0	140	40.0	0.3
<b>2. Direct capital costs</b>	<b>97,603</b>	<b>67,092</b>	<b>68.8</b>	<b>30,511</b>	<b>31.2</b>	<b>81.4</b>
2.1. Mass transit system	38,816	26,199	67.5	12,617	32.5	32.4
2.2. Beltway and integration of municipal roads	48,496	34,719	71.6	13,777	28.4	40.4
2.3. Road safety	4,254	2,552	60.0	1,702	40.0	3.6
2.4. Traffic signal system	3,500	2,100	60.0	1,400	40.0	2.9
2.5. Supervision of works	2,537	1,522	60.0	1,015	40.0	2.1
<b>3. Institutional strengthening</b>	<b>2,775</b>	<b>1,665</b>	<b>60.0</b>	<b>1,110</b>	<b>40.0</b>	<b>2.3</b>
3.1. Department of Transportation	1,710	1,026	60.0	684	40.0	1.4
3.2. Department of Public Works	341	205	60.0	136	40.0	0.3
3.3. Department of Housing and the Environment	724	434	60.0	290	40.0	0.6
<b>4. Associated costs</b>	<b>15,356</b>	<b>683</b>	<b>4.4</b>	<b>14,673</b>	<b>95.6</b>	<b>12.8</b>
4.1. Expropriation	9,962	0	0	9,962	100	8.3
4.2. Environmental mitigation and compensation	1,366	683	50.0	683	50.0	1.1
4.3. Resettlement	4,028	0	0	4,028	100	3.4
<b>GRAND TOTAL</b>	<b>120,000</b>	<b>72,000</b>	<b>60.0</b>	<b>48,000</b>	<b>40.0</b>	<b>100</b>



### **III. PROGRAM IMPLEMENTATION**

#### **A. Borrower, guarantor, and executing agency**

- 3.1 The borrower and executing agency will be the municipio of São Bernardo do Campo (MSBC). The guarantor of corresponding financial obligations will be the Federative Republic of Brazil.
- 3.2 Program implementation will be coordinated by the MSBC via a centralized Urban Transportation Program Coordination Unit (PCU) attached to the Mayor's Office, which was created by Municipal Decree No. 8084/2002 pursuant to Municipal Act 5085/2002, as the enabling statute. PCU operations will be coordinated directly by the Secretary in Charge of Special Projects. The PCU will be directly responsible for program monitoring and implementation and, where necessary, for coordinating with the Departments of Administration, Finance, Public Works, Housing and the Environment and Urban Services through the Secretary in Charge of Special Projects.

#### **B. Executing agency and its organizational structure**

- 3.3 The municipio of São Bernardo do Campo (MSBC) is an administrative subdivision of the Federative Republic of Brazil and an integral part of the State of São Paulo (paragraph 1.12). The executive branch of the MSBC city government is organized according to Municipal Act N° 2240 of 13 August 1976, as amended, into a direct and indirect administration system. The direct administration system encompasses all municipal government operations engaged in directly by units forming part of the administrative structure of the Office of the Chief Executive, or Mayor. Thus, the direct administration system consists of: (i) deliberative, consultative, and briefing units to assist the Mayor in discharging his administrative duties; (ii) advisory and direct support units to assist the Mayor with ancillary duties and the coordination and oversight of inter-office matters and programs; (iii) municipal departments (*secretarias*) generating intermediate outputs and final products representing top-level planning, coordination, supervision, implementation, monitoring and policy-making bodies for Executive Branch's operations.
- 3.4 The indirect administration system consists of agencies and entities established by the municipal government, with independent legal status. Indirect administration system agencies and entities are divided into the following categories: (i) decentralized municipal government agencies; (ii) municipal public foundations; and (iii) government enterprises. Indirect administration system agencies and entities are attached to the municipal departments with jurisdiction over their main sphere of activity. The Empresa de Transporte Coletivo (ETC) [Mass Transit Company] (paragraph 1.8) is a private legal entity with independent assets and

revenues established under the tenets of municipal law to conduct business as a corporation, with all voting stock held by the municipio.

- 3.5 Although the MSBC has been gradually reducing the size of its staff, this has not affected the quality of the public services operated by the municipio, which has been able to maintain consistent levels of service for which it is known throughout the RMSP. The MSBC has demonstrated that it has the technical, administrative, and financial capability to outsource works and services to private firms and oversee their performance (paragraph 1.12). It will be strengthened with the implementation of the proposed program by a program management support firm that will have a multidisciplinary structure and previous experience conducting programs in conjunction with multilateral agencies. Accordingly, any previous and future reductions in force by the MSBC should not affect due and proper program implementation.

**C. Program implementation and management**

- 3.6 The borrower or, more specifically, the PCU will be in charge of all bidding (local and international) for the procurement of goods, the hiring of consulting services, the award of construction contracts, and the administration and oversight of all procurement procedures. It will also be responsible for program accounting and financial management services. To accomplish this aim, it will use program funding to retain the services of a consulting firm to assist the PCU with environmental management and supervision under the program. Program operating regulations are considered unnecessary, in light of the centralized authority vested in the Secretary in Charge of Special Projects and his role as liaison officer with other MSBC departments, the advanced degree of readiness of the designs for the works (paragraph 3.17) and considering that all eligible interventions were duly reviewed and identified during the program preparation phase.

**D. Financial management, budgeting and budget performance monitoring**

- 3.7 The Departments of Finance and Administration are in charge of managing MSBC budget funds and monitoring budget performance. The Department of Administration is the planning agency for the MSBC, with a central planning unit which, together with the sector planning unit in each department, coordinates all budgeting and budget performance efforts. All such activities are being carried out satisfactorily, with appropriate control procedures.
- 3.8 The MSBC budget process begins with the formulation of budget proposals by each department. The budget is drawn up in accordance with the Multi-Year Plan and Budget Guidelines Act (LDO) and passed in the first half of each year and is effective for a one-year period. The annual budget drawn up by the Executive Department is submitted to the city council for final approval.

**E. MSBC internal and external control mechanisms**

- 3.9 The MSBC has an internal and external control system for all municipal government operations. The Legal Department is responsible for all municipal government audit activities, including: (i) internal audits by the Permanent Internal Audit Commission; and (ii) outside audits by the São Paulo State Audit Office. Each of these bodies operates within its respective sphere of authority and responsibility and is considered to have performed its tasks satisfactorily. The MSBC draws up bimonthly and quarterly budget performance monitoring reports under the Fiscal Responsibility Act (LRF) that are forwarded to the National Treasury Department (STN). It also holds public hearings every four months to evaluate budget performance.
- 3.10 The MSBC will be accountable to the Bank for: (i) opening separate bank accounts specifically for administration of loan proceeds and local counterpart funds; (ii) ensuring the existence of a proper system of (a) internal control and financial and accounting records of the source and application of program funds pursuant to section 7.01 of the general contractual conditions; and (b) a proper filing system for supporting documentation on allowable expenses for verification by the Bank and the outside auditors; (iii) drawing up and presenting (a) semiannual reports on the revolving fund; and (b) disbursement requests and corresponding justification of expenses; and (iv) drawing up any other reports that may be required by the Bank.

**F. Financial standing of the borrower and executing agency**

- 3.11 A review of the MSBC's financial track record and of the entity's financial projections evaluated its financial capacity to construct municipal public works and the feasibility of it being considered a qualified borrower of the Bank.

**1. Financial review**

- 3.12 For the past five years, the MSBC city government has been making a serious effort to strengthen its finances and reduce its debts. On 25 September 2001, the Mayor signed a funded debt refinancing agreement with the National Treasury Department for R\$30.6 million under which it has met all its contractual obligations and payment deadlines in a timely fashion. In 2002, the Ministry of Finance signed a US\$2.7 million onlending agreement with the Bank providing for an equal amount of counterpart funding by the municipio as part of the Bank-financed "National Program to Support the Administrative and Fiscal Management of Brazilian Municipalities" (PNAFM) in an endeavor to modernize the municipio's fiscal management system. The specific focus of the PNAFM was: (i) organization and management; (ii) information technology; (iii) legislation; (iv) property records; (v) tax collection; (vi) auditing; (vii) customer service; (viii) integration; (ix) disputes; (x) economic and tax studies; (xi) accounting; and (xii) integrated financial management. The effects of this endeavor to overhaul MSBC finances should begin to bear fruit starting in 2004 with the initial outputs by the PNAFM.

Including miscellaneous outstanding debts under various programs with the Caixa Econômica Federal (the Federal Savings Bank), the BNDES (the National Economic and Social Development Bank) and the Bank of Brazil, the MSBC had a net consolidated debt of R\$53.35 million as of 31 December 2003, which is in line with relevant statutory ceilings under Brazilian legislation.

- 3.13 Table 2 compares statutory ceilings under current legislation, specifically, Article 19 of Law No. 101/00, also known as the Fiscal Responsibility Act (LRF), and

<b>Table 2. Compliance with LRF and RSF statutory ceilings</b>			
Legal limit and standard	Statutory ceiling	<sup>1</sup> Computed index	<sup>2</sup> Computed index
Annual expenditures, including wages/NCR <sup>3</sup>	60.0%	40.18%	38.95%
Aggregate value of transactions in a single fiscal year /NCR <sup>3</sup>	16%	0 %	0.04 %
Annual value of loan payments and other debt service obligations/NCR <sup>3</sup>	11.5%	0.91%	0.99%
Value of allowable net funded debt	1.20	0.15	0.09
<sup>1</sup> for the period from January to December 2003			
<sup>2</sup> for the period from May 2003 to April 2004			
<sup>3</sup> NCR: net current revenues			

and indexes computed on the basis of MSBC balance sheet data for the periods from January to December 2003 and May 2003 to April 2004. The comparison shows that, from a legal standpoint, the MSBC is in compliance with all statutory ceilings set by the LRF and other related legislation governing municipal government borrowing. Thus, the MSBC is legally able to obtain foreign loans.

- 3.14 The figures in Table 3 show a steady decline in current revenues, at 2003 prices, over the period from 1999 to 2003. MSBC current revenues fell by 14.5% in real terms between 1999 and 2003. However, at the same time, current expenditures were cut by 16.5%, while tax revenues grew by 58.5%. These figures are indicative of a long-term positive trend towards a sustainable budget surplus. In other words, the MSBC is generating savings for the financing of future investments. The data in

<b>TABLE 3. SUMMARY OF PMSBC BUDGETS FOR 1999-2003</b>					
<b>In millions of constant reales (at 2003 prices)</b>					
Year	1999	2000	2001	2002	2003
<b>1. Current revenues</b>	<b>1,126.30</b>	<b>1,152.42</b>	<b>1,177.51</b>	<b>1,033.10</b>	<b>963.33</b>
1.1 Tax revenues	195.20	172.16	246.77	289.27	309.44
1.2 Transfer revenues	675.42	690.36	666.06	505.02	454.70
1.3 Investment revenues	33.1	30.87	26.58	20.79	16.73
1.4 Industrial revenues	142.49	147.40	77.69	71.73	81.35
1.5 Service revenues	33.26	30.70	25.88	15.01	2.67
1.6 Other current revenues	46.23	80.91	134.24	130.95	97.46
<b>2. Current expenditures</b>	<b>981.64</b>	<b>1,040.92</b>	<b>990.94</b>	<b>873.98</b>	<b>820.08</b>
2.1 Expenditures including personnel	486.83	517.33	507.72	448.48	392.75
2.2 Other current expenditures	358.82	359.24	324.03	342.56	378.43
2.3 Transfer payments	135.99	164.35	159.19	82.94	48.90
<b>3. Current savings (1-2)</b>	<b>144.66</b>	<b>111.50</b>	<b>186.57</b>	<b>159.12</b>	<b>143.25</b>
<b>4. Investments</b>	<b>149.24</b>	<b>117.26</b>	<b>196.18</b>	<b>155.02</b>	<b>181.56</b>
<b>5. Debt service</b>	<b>13.99</b>	<b>10.73</b>	<b>11.83</b>	<b>10.66</b>	<b>11.33</b>
<b>6. Surplus/deficit (3-4-5)</b>	<b>(18.57)</b>	<b>(16.49)</b>	<b>(21.44)</b>	<b>(6.56)</b>	<b>(49.64)</b>
<b>7. Capital revenues</b>	<b>19.37</b>	<b>20.06</b>	<b>2.87</b>	<b>6.08</b>	<b>53.451</b>
<b>8. Borrowing</b>	<b>13.19</b>	<b>15.81</b>	<b>0.43</b>	<b>693</b>	<b>0.00</b>
<b>9. Surplus/deficit (6+7+8)</b>	<b>13.99</b>	<b>19.38</b>	<b>(18.14)</b>	<b>6.45</b>	<b>3.82</b>

Table 3 illustrates the effects of the MSBC's policy of steadily increasing tax revenues while taking measures to cut current expenditures. The large cuts in transfers between 1999 and 2003 are also noteworthy. Federal and state tax revenues are expected to start growing again and, as a result, transfers at both the federal and state levels should increase as the Brazilian economy stabilizes, with the likelihood of recovery. Improvements in fiscal management, in the collection of taxes and in the management and collection of outstanding debts with the

implementation of the PNAFM beginning in 2003 should also grow municipal tax revenues. The MSBC Finance Department is about to approve an issue of CEPACs (Certificados de Potencial Adicional de Construção) [Construction Capacity Extension Certificates] to be traded on the securities market to generate additional revenues.

## 2. Financial projections

- 3.15 Table 4 contains financial projections for the MSBC for the period 2004-2012 based on its previous budget performance record and expected trends in different variables over the projection period. The table also shows the actual 2004 budget. The basic assumptions used in making these projections were as follows: (i) an annual inflation rate of 5% and real annual growth rate of 2% for the period from 2004 to 2008, followed by a 4% inflation rate and real growth of 2% starting in 2009; (ii) the value of MSBC local counterpart funding for the period from 2004 to

<b>Table 4. Recap of projections of MSBC revenues/expenditures for the period 2004-2012</b> (in millions of reales)									
Item	YEARS								
	2004	2005	2006	2007	2008	2009	2010	2011	2012
1 – CURRENT REVENUES	978.3	1,038	1,101	1,168	1,241.3	1,310	1,383.4	1,459	1,541
2 – CURRENT EXPENDITURES	788.2	832.4	879.1	928.5	980.6	1,039	1,101.8	1,167	1,238
3 – CURRENT SAVINGS (1-2)	190.1	205.6	222.3	240.3	260.7	271.0	281.6	291.5	303.6
4 – INVESTMENTS	110.6	160.3	178.4	179.5	196.8	208.6	221.5	171.6	218.7
4.1 – Investments	99.6	148.3	165.3	165.3	181.3	191.7	203.1	149.7	194.8
4.1.1 – PMSBC, excluding the SBCUTP **	99.6	82.6	99.6	99.6	115.6	126.0	137.4	149.7	194.8
4.1.2 – SBC Urban Transportation Program	0	65.6	65.6	65.6	65.6	65.6	0	0	0
- PMSBC counterpart	0	26.3	26.3	26.3	26.3	26.3	26.3	0	0
- With IDB loan	0	39.4	39.4	39.4	39.4	39.4	39.9	0	0
5 – DEBT SERVICE	13.2	13.7	16.1	18.4	19.2	19.8	21.8	36.9	36.1
5.1 – Interest and other obligations	7.7	8.8	11.0	13.0	14.5	15.74	17.6	17.4	16.6
5.1.1 – Domestic debt	7.7	8.0	8.1	8.2	7.8	7.2	7.2	5.8	5.8
5.1.2 – External debt – IDB	0	0.8	2.9	4.8	6.7	8.54	10.4	11.59	10.75
5.2 – Repayments of principal	5.5	4.9	5.1	5.4	4.7	4.1	4.2	19.5	19.6
5.2.1 – Domestic debt	5.5	4.9	5.1	5.4	4.7	4.1	4.2	2.6	2.7
5.2.2 – External debt – IDB	0	0	0	0	0	0	0	16.87	16.9
6 – SURPLUS/(DEFICIT) (3-4-5)	(87.1)	(98.3)	(66.5)	(55.1)	(17.5)	66.5	65.3	83.0	48.8
	66.3	31.6	27.8	42.4	44.7	42.6	38.3		
7 – CAPITAL REVENUES	6.2	6.7	7.1	6.3	8.2	8.7	9.2	9.7	10.3
8 – BORROWING						21.4	22.7	24.1	25.5
8.1 – Domestic	15.4	16.5	17.6	18.9	20.2	21.4	22.7	24.1	25.5
8.2 – External – IDB	-0	39.9	39.4	39.4	39.4	39.4	39.39	0	0
9 – SURPLUS/(DEFICIT) (6+7+8)	87.9	94.2	91.9	107.0	112.9	112.1	109.6	116.8	84.6

2008 was computed assuming a pari passu financing ratio of 60% IDB to 40% PMSBC funding; (iii) the 13% share of the MSBC budget currently earmarked for investments and maintenance of the urban transportation system will remain unchanged; (iv) tax revenues will increase by 7% beginning in 2004 as a result of the PNAFM; and (v) current payroll costs, including active staff and retirees, will remain the same. As indicated by the data presented in Table 4, the MSBC has the means with which to furnish counterpart funding and meet its financial obligations stemming from the Bank loan while maintaining a significant surplus through 2012. The analysis looked at three alternative disbursement scenarios, as well as a fourth scenario in which the MSBC covers the cost of the program without the benefit of Bank financing. In this scenario, it turns out that the budget surplus is not large

enough to finance the cost of program without resorting to outside financing. Even a scenario in which current revenues grow by only 5% a year, which is barely enough to offset inflation and keep current expenditures and investment at the aforesaid levels, would not produce a budget deficit during the period from 2004 to 2012.

- 3.16 According to the findings from these analyses, the MSBC qualifies for the loan and would be able to furnish necessary counterpart funding for program implementation as scheduled under all three disbursement scenarios. The analyses also established that the use of internal funding by the MSBC to help ensure program sustainability would not affect the quality of the public services it provides to city residents.

## **G. Readiness and program implementation**

### **1. Works**

- 3.17 The MSBC has studies on the technical, economic, and environmental viability of the program. Among the program objectives is to carry out nine interventions, four of which have final designs completed. The remaining five have preliminary designs that were reviewed and final designs that are at an advanced stage of preparation. As a result, the MSBC has already hired the firm that will conduct the technical studies and prepare the additional designs necessary for the whole program. The nine sets of road works were included the representative sample of program works. The sample covers 87% of the budget for all the construction work under the program. The final designs for the two public transportation terminals have also been completed.

### **2. Road safety and traffic signal system**

- 3.18 The MSBC drew up an in-depth preliminary proposal for necessary interventions designed to improve road safety, with specific works and activities to be selected based on a road safety audit (paragraph 2.12). This audit is being conducted by the consulting firm retained by the MSBC to prepare the final designs for all program works, which will also perform the detailed studies for the traffic signal system component, and is already at a considerably advanced stage of preparation (paragraph 2.13). To ensure that final designs for program interventions are available on schedule, one of the conditions precedent to initiation of the works for the interchange at kilometer 17 of Via Anchieta Highway (paragraph 3.38) is the completion of all required studies, designs, final designs and terms of reference necessary for procurement.

### **3. Environmental considerations**

- 3.19 All environmental studies pertaining to the proposed program were conducted in accordance with current domestic environmental legislation and meet Bank requirements for comparable projects. Outputs include: (i) environmental impact assessments (EIA); (ii) environmental management plans, including a resettlement

plan for impacted low-income residents; and (iii) institutional strengthening measures for the PMSBC in environment-related areas. In compliance with the Bank's information disclosure policy, all such documents have been available for public scrutiny since 21 November 2003. The environmental report was published by the PIC on 26 November 2003 and discussed by the CESI at its meeting on 27 February 2004. Chapter V of the report discusses recommended mitigation measures and environmental management programs in depth.

#### 4. Institutional strengthening

- 3.20 All institutional strengthening activities have been fully mapped out, including the technical specifications for procurement of hardware and software, the technical training program, and the terms of reference for engineering drawings and regulatory manuals. The logical framework (Annex I) presents full particulars on this component. The Department of Transportation will be duly established in the second half of 2005.

#### 5. Procurement

- 3.21 For purposes of procurement, the works will be divided into three packages in order to achieve economies of scale in construction and supervision. With the nonobjection of the Bank, the MSBC published the general procurement notice (GPN) in the United Nations *Development Business* and the specific procurement notice (SPN) for bidding on the three packages, the selection of the consulting firm to support the PCU in environmental supervision and management of the program, and the selection of the consulting firm to supervise the works.

- 3.22 To expedite program implementation, and with authorization from the project team, the MSBC has already set in motion the process of putting out to tender the works, as well as technical supervision and a management support firm. The terms of

Table 5. Schedule of Stage I bidding procedures		
Activity	Phases	Date
Hiring of a program management support firm	Opening of bids	2nd half of 2004
	Signature of the contract	1 <sup>st</sup> half of 2005
	Initiation of work	1 <sup>st</sup> half of 2005
Hiring of a construction supervision firm for program works	Opening of bids	2nd half of 2004
	Signature of the contract	1 <sup>st</sup> half of 2005
	Initiation of work	1 <sup>st</sup> half of 2005
Award of construction contracts	Opening of bids	2nd half of 2004
	Signature of the contract	1 <sup>st</sup> half of 2005
	Initiation of work	1 <sup>st</sup> half of 2005

reference have already received the Bank's nonobjection. All procurement will conform to international competitive bidding procedures in accordance with Bank policy and the bidding is at an advance stage. The scheduled dates of each bidding procedure are indicated in Table 5.

#### 6. Revolving fund

- 3.23 A revolving fund amounting to 5% of the loan will be established for purposes of making advances against loan proceeds.

## **7. Rights of way**

- 3.24 Whenever a right of way needs to be widened, the borrower will need to furnish evidence of having reached an agreement with impacted property owners on the amount of the payment or compensation they are to receive for any affected property or having arranged for the transfer of such property before the Bank will authorize initiation of the works under the respective contract. Moreover, any resettlement of low-income residents necessitated by such works will be made in accordance with Bank policy (Policy OP-710 on Involuntary Resettlement). The MSBC will need to show proof of implementation of the corresponding expropriation and resettlement plan, in full, as a condition precedent to securing authorization for the initiation of such works (paragraph 3.40).
- 3.25 The MSBC is to obtain a commitment from the enterprises in charge of any public services impacted by envisaged program works to furnish any and all necessary cooperation for construction purposes prior to initiation of such works.

## **8. Targets and indicators**

- 3.26 The logical framework (Annex I) shows the targets and indicators to be used to monitor the program entailing: (i) physical requirements, including the construction of program works; (ii) institutional requirements, including the preparation of engineering drawings, regulatory manuals, and professional training courses and the installation of computer hardware and software; and (iii) operational requirements such as reductions in travel time and transportation costs.

## **9. Ex post evaluation**

- 3.27 The project team discussed the performance of an ex post evaluation of the program with the MSBC, which considers such an evaluation important and is willing to provide necessary financing. The evaluation is to be conducted between three and five years after the completion of the program. The MSBC has the resources and funding it needs to compile statistical data and conduct periodic surveys, which are now being conducted as a routine part of its operations. The baseline would be the same as that used for the logical framework (Annex I) and the benchmarks will be determined upon initiation of the consulting services that will support the PCU in program management. The program also provides for a midterm review to be conducted three years into the program implementation period. The resulting report is to be submitted to the Bank within 60 days after the end of this three-year period. Moreover, the terms of the methodology to be used to measure the performance indicators for the evaluations was agreed upon with the MSBC.<sup>4</sup>

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<sup>4</sup> PMSBC, *Marco Lógico: Metodologia de Medição*, March 2004. IDBDOCs 310917.



## **H. Procurement of goods and services**

- 3.28 Program works will be carried out by private construction firms. Independent specialized consulting firms will supervise program works, perform studies, and provide technical assistance. If authorized by the Bank, the courses for training of ST, SO, and SHAMA staff may be administered through universities under a special agreement to be signed by PMSBC and the respective institution, according to a model approved by the Bank.
- 3.29 Contract for works, services, goods, and consulting services will be awarded in accordance with Bank procedures. Contracts for program works valued at or above US\$5,000,000, goods valued at or above US\$350,000, and consulting services valued at or above US\$200,000 will require international competitive bidding.
- 3.30 The MSBC will be in charge of administrating these contracts and overseeing service delivery by the consulting firms. Its own capabilities and experience and the assistance provided by the firm to be hired for management support should be sufficient to enable it to fulfill this responsibility. A large share of the procurement will require international competitive bidding. A procurement plan is presented in Annex II.
- 3.31 The MSBC may use any of the systems for the hiring of consulting services, as set forth in the loan contract: (i) quality-based selection (QBS); (ii) quality- and cost-based selection (QCBS); (iii) least cost-based selection (LCBS); and (iv) fixed budget-based selection (FBBS).

## **I. Program implementation period and disbursement schedule**

- 3.32 The program implementation and loan disbursement period is six years, as established by the STN. Program disbursements will be in a fixed amount of US\$20 million annually over the six-year period.

## **J. Monitoring and evaluation**

- 3.33 The Bank's Country Office in Brazil will be in charge of monitoring the program. The project team may assist it with this task, if so requested. The program will be monitored through: (i) semiannual reports containing the following elements: (a) information on progress made with respect to agreed-on program implementation indicators and scheduled disbursements; (b) updated implementation and disbursement schedules for pending program activities; (c) information on compliance with the contractual conditions; (d) a detailed work schedule and action plan for the following two six-month periods; (e) monitoring data on logframe indicators; and (ii) standard nonobjection procedures for procurement of works and goods and services.

**K. Audits**

- 3.34 The Bank will be presented with annual financial statements for the program within 120 calendar days after the close of each fiscal year, duly examined by an independent auditing firm acceptable to the Bank, to be selected according to the procedures established in document AF-200 for the procurement of Bank-financed external auditing services. Final audited program financial statements are to be submitted to the Bank within 120 days after the date of the last disbursement. Audits must be conducted according to terms of reference approved by the Bank in advance (document AF-400) and will meet the Bank's external auditing requirements (documents AF-100 and AF-300).

**L. Maintenance**

- 3.35 The project team established that the MSBC provides adequate maintenance for existing road infrastructure, as reflected by the good condition of the road system. In view of the importance of maintaining the works to be implemented as part of the program to ensure the materialization of expected program benefits, the borrower undertakes to maintain all program works and equipment in accordance with generally accepted technical standards. It further undertakes to furnish the Bank with annual maintenance reports for completed works and installed equipment beginning in year two, with a final report one year after the date of the last disbursement. This latter report will contain general information on the MSBC and its organizational structure and maintenance procedures, an inventory of the state road network and information on its condition, an evaluation of maintenance services performed during the previous year, and the maintenance plan in effect for the fiscal year in progress, data on traffic accidents, weighing station data on compliance with load and size limits, and data on traffic counts on system roads.
- 3.36 Should Bank inspections find the quality of such maintenance falls short of acceptable technical standards, the borrower will take such measures as are necessary to correct any weaknesses in line with its contractual obligations to the Bank.

**M. Loan conditionality**

- 3.37 **Conditions precedent to the first disbursement.** The borrower is to furnish evidence of the following to the Bank's satisfaction via the PCU: (i) the signature and entry into effect of agreements between the MSBC and the municipios of Diadema, Santo André, and São Caetano do Sul for the construction of scheduled works within their jurisdiction based on the model agreed on with the Bank; and (ii) the hiring of a firm to assist the PCU with program management and environmental management activities based on terms of reference previously agreed on with the Bank.

- 3.38 **Conditions precedent to initiation of works for the interchange at kilometer 17 of Via Anchieta Highway.** The borrower, through the PCU, is to submit evidence of completion of the completion of the detailed studies, final designs and terms of reference for the bidding under the following program components, to the Bank's satisfaction: (i) the road safety component; and (ii) the traffic signal system upgrading component, based on terms of reference previously agreed on with the Bank.
- 3.39 **Conditions precedent to initiation of the works for the connection between Avenida Lauro Gomes, Avenida Taboao, and Avenida Rudge Ramos and for the interchange on the city center/Rudge Ramos corridor.** The borrower, through the PCU, is to submit evidence of the following, to the Bank's satisfaction: (i) the start-up of the Department of Transportation, with staffing and funding as agreed on with the Bank; (ii) the conclusion of the contract award phase of the bidding process for the hiring of a firm to develop the master urban transportation plan for SBC; (iii) the conclusion of the contract award phase of the bidding process for the hiring of a firm to develop the master transportation plan for hazardous loads; and (iv) the conclusion of training activities for technical staff in the Departments of Transportation, Public Works, and Housing and the Environment.
- 3.40 **Condition precedent to initiation of any program works.** The borrower is to furnish evidence of the following, to the Bank's satisfaction, via the PCU: (i) in the case of works requiring resettlement, implementation, in full, of the expropriation and resettlement plan for the stretch or section of works in question; and (ii) issuance of an environmental installation permit for such works.

## **IV. FEASIBILITY AND RISKS**

### **A. Institutional feasibility**

- 4.1 The MSBC, as the entity solely responsible for program implementation, has demonstrated that it has the technical, administrative, and financial capability to contract out works and services to private firms and oversee their performance. The lessons learned from previous programs in Brazil show that a number of programs were delayed by problems with counterpart funding. The financial analyses performed (paragraph 3.14) have established that the MSBC has the financial means with which to furnish counterpart funding and meet its loan repayment obligations. Accordingly, in the case of the MSBC, there should not be any delays in program implementation due to shortages of local counterpart funding.
- 4.2 The MSBC has a Special Projects Department and is in the process of hiring a program management support firm with experience providing advisory services to public sector clients conducting programs in conjunction with multilateral lending agencies to ensure proper coordination and oversight of the activities of all entities involved in the program. Current institutional arrangements meet Bank requirements for program implementation. These factors indicate that the MSBC has the capability to take on the responsibilities and discharge the duties engendered by this program.

### **B. Technical feasibility**

- 4.3 The technical appraisal of initiatives carried out as part of the program planning and functional design phase was based on two methods of sequential analysis commonly used in transportation programs, macro and micro analysis. The macroanalysis involved the calibration and subsequent use of a transportation demand model including basic trip generation variables (population, land use, income, etc.), modal distribution variables (travel time on the public transit system, travel time by private vehicle, operating costs, etc.) and flow distribution variables (operating characteristics of mass transit routes, operating characteristics of the road system, configuration of the road network, etc.) This analysis was used to forecast demand for each intervention under different scenarios over a twenty-year time horizon at five-year intervals. The scenarios used included, different combinations of interventions, as well as variations in basic modeling parameters such as land use, population, modal distribution and other similar factors.
- 4.4 Following the macroanalysis, each intervention was subject to operational appraisals through the modeling of different scenarios using a microscopic traffic simulation model. These modeling exercises helped optimize the performance of each intervention to establish the functional configuration producing the best results within the context of the existing road network. The micro analysis produced operational indicators (delays, service levels, operating speeds, fuel consumption,

- pollution emissions, etc) related directly to the intervention in question or to other elements of the transportation system impacted by the intervention. The final functional configuration of each intervention was the product of repeated optimization exercises based on the aforesaid models. The next step was an economic appraisal to determine which of the interventions would be included as part of the program.
- 4.5 The designs of the projects making up the representative sample of program works were developed using modern computation and scaling methods and criteria, based on internationally accepted engineering standards. The MSBC hired a consulting firm specifically for this purpose with extensive experience in this area, which will also be in charge of preparing blueprints and performing any other engineering studies required for program implementation purposes. The unit prices used to establish sample project costs were obtained from three basic sources: (i) market prices of road projects within the RMSP; (ii) costs of recent infrastructure projects carried out by the MSBC; and (iii) direct inquiries by the MSBC with potential suppliers with respect to specific cost items.
- 4.6 Since the construction drawings and diagrams for the representative sample of works show there should not be any complications with the construction work for these interventions, their technical feasibility should not be an issue. As remaining program interventions have been duly appraised and approved from the technical standpoint through macro and micro analysis. The construction drawings for these interventions will be drawn up using the same stringent standards as employed for the representative sample. Due to the complexity of the selection process, only those works appraised as part of the program preparation phase will be eligible for program funding. In anticipation of any unforeseen price escalation, program interventions were scheduled according to ranking criteria considering the rate of return as well as the role and effectiveness of each intervention as part of the overall package.
- 4.7 The scheduling of mass transit interventions was designed to ensure a smooth transition between the current municipal public transportation system and the integrated system to be established over the long term, whose development will be set in motion by scheduled program activities. Without exception, the mass transit component will give priority to works producing the most immediate benefits for system users, to enable riders to see a visible improvement in major level-of-service indicators such as travel time. There are no institutional constraints on the establishment of the integrated system, since the concession agreement entered into by the MSBC with the consortium SBCTRANS back in 1998 anticipated a transition to this type of system. The creation of the Department of Transportation and the program training component will further strengthen MSBC capabilities for public transportation planning and the operational monitoring of public transit services under the new operating system.

## C. Socioeconomic feasibility

4.8 The economic appraisal of interventions envisaged was based on a comparison of the economic costs and benefits accruing “with the project” versus the “without the project”. The appraisal looked at the program as a whole and at its major investment components. The program planning process included appraisals of individual works and packages of works to establish construction priorities. The costs considered in these analyses included the investment and maintenance costs of each intervention. The benefits included savings in travel time and fuel consumption and miscellaneous savings on vehicle operating costs and transportation infrastructure costs. There are also residual benefits which could not be quantified in monetary terms due to methodological weaknesses and information gaps, such as reductions in air pollution levels, reductions in costs engendered by traffic accidents, the use of bicycle lanes for transportation and recreational purposes, improvements in universal access within the MSBC, and the improvement in the competitiveness of the entire region.

4.9 The analysis of the annual cost and benefit stream for each package of interventions over a twenty-five-year period yielded a NPV of 12% and established the EIRR. Sensitivity analyses considered the case of a 20% rise in investment costs, a 20% reduction in incremental benefits for the “with project” versus “without the project” and the effect of simultaneous variations of approximately 10% in both costs and benefits. The findings are summed up in Table 6. The program’s overall rate of return was 26.2%.

Table 6. Program economic rate of return indicators						
	Investment (US\$ mil.)	NPV (US\$ mil.)	EIRR (%)	SENSITIVITY ANALYSIS EIRR (%)		
				+20% costs	-20% benef.	+10% costs & -10% benef.
Complete program	101.69	162.14	26.2	23.8	23.3	23.6
Mass transit system	45.28	35.74	20.2	18.3	17.9	18.1
Municipal beltway	52.39	185.50	34.9	32.1	31.5	31.8

The figures for each component show the component with the highest rate of return to be the municipal beltway, at 34.9%, which is only logical considering its metropolitan scale, attracting high volumes of metropolitan and interregional traffic currently congesting local roadways within the municipio. The component with the lowest rate of return is the municipal mass transit system component, at 20.2%. Aside from its rate of return which, in itself, is good, the strategic importance of restructuring the city’s mass transit system to improve access and mobility in the western sector of the municipio and integrate the city’s eastern and western sectors cannot be overemphasized.

4.10 The sensitivity analyses for the various scenarios yield rates of return of 17.9% or higher for each major component of the program, which is indicative, not only of the good performance of the program per se and its various components under different sets of circumstances, but also of a remarkable level of economic stability and lack of economic risk.

4.11 The economic appraisal of the mass transit component was rounded out by an incremental financial analysis of the new municipal mass transit system from the

standpoint of the private operator. This analysis did not consider any fare increases from the operation of the integrated system, since the large-capacity buses for trunk routes are to be phased in gradually to replace conventional buses retired at the end of their service life. The findings from this additional analysis put the minimum incremental return (EIRR) to the service provider on investments and operational adjustments necessitated by the change-over from the existing public transit system to the integrated system proposed under this program at 19.6%. This minimum financial return associated solely with differences in operating costs and spending on rolling stock for the integrated versus the existing system reflects the various operational advantages of the new integrated system, such as: (i) reductions in travel time and operating costs for many routes; (ii) economies of scale resulting from the operation of trunk routes with higher vehicle operating speeds; (iii) reductions in passenger loading/offloading times; and (iv) a generally more efficient use of the vehicle fleet (including the use of articulated buses).

#### **D. Financial feasibility**

- 4.12 For the past five years, the municipal government of SBC has been making a serious effort to strengthen its finances and reduce its debts. Current revenues fell by 14.5%, SBC current expenditures, at 2003 prices, were cut by 16.5% and tax revenues grew by 58.5% between 1999 and 2003. These figures are indicative of a sustained long-term trend towards a budget surplus and point to the generation of sufficient savings to finance future investments (paragraph 3.14). The review of MSBC finances (paragraph 3.15) shows that the municipio has the technical and financial capability to meet its commitments under a Bank loan and furnish necessary counterpart funding. The analysis also found that, from a legal standpoint (paragraph 3.13), the MSBC is in compliance with ceilings prescribed under the Fiscal Responsibility Act and other related legislation.

#### **E. Socioenvironmental feasibility**

##### **1. Potential socioenvironmental impacts**

- 4.13 The EIA established the potential negative impacts of program implementation and recommended a series of mitigation measures. The program's positive impacts will come about during its operating phase, producing important socioeconomic benefits, particularly for low-income residents. The potential positive impacts of the program include, but are not limited to: (i) better access to jobs, services, and recreational facilities and shorter travel times; (ii) a reduction in the number of traffic accidents involving motor vehicles; (iii) an improved mobility of pedestrians, cyclists, and the disabled; (iv) an improvement in air quality and a reduction in noise pollution; and (v) an attenuation of the adverse effects of heavy truck traffic in residential, business, and service areas and a lower risk of major traffic accidents. The main potential adverse effects of program implementation, which are concentrated primarily in the construction phase, include: (i) expropriations of property and/or resettlement of low-income residents; (ii) encroachments on green

areas; (iii) damage to borrow pit areas (for sand, gravel, and clay) for program works; (iv) accidents during the construction phase; and (v) slow traffic and congestion in construction areas. The MSBC held three rounds of public hearings with impacted communities and other interested entities.

## **2. Socioenvironmental impact management plan**

- 4.14 The basic environmental project (BEP) contains full particulars on all programs for the prevention and mitigation of any environmental impacts associated with program implementation and corresponding environmental compensation programs, including the resettlement and compensation plan for low-income residents. These environmental programs are summarized in the following paragraphs.
- 4.15 **Expropriation plan** (US\$9,962,000, included in the cost of program works), **resettlement programs for impacted low-income residents** (US\$4,029,000) **and compensatory measures for impacted activities** (US\$5,000, included in the contract with the program environmental management firm). The program's main negative impact is the forced displacement of area residents due to expropriations and/or relocations required for the construction of the works.
- 4.16 The program includes a resettlement and compensation plan based on Bank policy OP-710. In addition to the partial expropriation of two homes (which allows the families to continue to live on the property), according to real estate records and socioeconomic studies, of the 409 families in housing units subject to total expropriation: (i) one higher-income family with higher-value properties will be covered under the monetary compensation and independent resettlement option (expropriation); (ii) 15 families will receive monetary compensation (for the property or any improvements) and government assistance in resettlement (guidance, access to lines of credit for housing expropriation assistance); and (iii) 393 families will be resettled in housing units constructed by the government, which will build two housing complexes with a total of 405 units, including two in SBC (with 229 units) and one in Diadema (with 176 units). The sites selected for the housing complexes are all located within the respective city limits, in areas with public transportation and other services and community facilities. The relocation of part of its population and the resulting reduction in overcrowding in a major slum area will allow the Diadema municipal government to redevelop the rest of the area and upgrade another 103 housing units. The resettlement plan includes a major social services and family assistance program.
- 4.17 The amount of compensation payments will be based on the market value assessed by officially registered, established experts. The PMSBC will negotiate with property owners wherever possible, resorting to legal action only in cases where an agreement cannot be reached. It may not take possession of any property until the agreed compensation has been paid. The PMSBC also provided for an assistance package for the relocation of close to 11 small businesses affected by plans to



widen a number of avenues. There are also provisions for a major **public relations and media** campaign (US\$130,000, included in the program management and environmental supervision and management contract) with focuses changing over time, targeted primarily at the expropriation and resettlement, construction and operational phases of the program.

- 4.18 The **environmental impact management plan for construction activities** called for the formulation of environmental technical specifications and a specific, in-depth environmental management plan (EMP) for each intervention in the representative sample, to be included in the bidding conditions for the hiring of outside contractors for the construction and technical supervision of program works. Both the bidding conditions and corresponding contracts will include clauses establishing the environmental liability of the contractors in question, the binding nature of the environmental and occupational safety-related specifications and standards set in the EMPs and prescribed penalties for any violations which are not duly remedied. Environmental supervision services for program works will be furnished independently of technical supervision activities for engineering works, as an integral part of the program. In line with the **urban redevelopment, landscape planning** and **vegetation restoration** plan, all sample interventions include final engineering designs for redevelopment and landscaping projects with meticulous plans for urban integration of the road system. There are also efforts under way to assess and develop specific guidelines for the remedying of environmental liabilities associated with the roadways included in the corresponding **environmental liability remediation plan** (US\$50,000).
- 4.19 The program is not expected to have any adverse effects on habitat corridors or conservation units, since all targeted roadways lie within the municipio's greater metropolitan area and all major road-related environmental conflicts have already materialized. The **vegetation restoration and environmental compensation plan** (US\$1,159,000) will duly offset impacted permanent conservation areas (PCAs), with all inescapable program environmental impacts to be offset by the creation of a municipal natural park on a previously selected 49-hectare site. The creation of the park will require displacing a community of close to 200 low-income households, which are to be relocated by the PMSBC with internal funding. The **archeological, historical and cultural heritage preservation plan** (US\$117,000) is designed to publicize and disseminate heritage information, as well as to mitigate and offset any direct and indirect impacts of construction work and of the operation of program interventions.
- 4.20 The **institutional environmental capacity-building plan** (US\$980,000) will bolster institutional strengthening activities in environment-related areas in three municipal government departments: (i) the Department of Transportation to be created as part of the program (formulation of a master transportation plan for hazardous materials); (ii) the Department of Public Works (environmental management of projects and works); and (iii) the Department of Housing and the Environment (US\$724,000). The program provides guidelines for the formulation and

subsequent implementation of a *master transportation plan for hazardous materials* (US\$180,000), outlining its major technical characteristics and scale.

- 4.21 The *environmental monitoring* (US\$89,000) system will monitor the key indicators established in the logical framework. The program will include a geo-referenced data bank and monitoring and evaluation subsystems. It also provides for the monitoring of environmental control measures for program works and springs in the municipal area. The PCU will retain the services of a group of specialized professionals to support the program's **environmental management** and hire another group to provide **environmental supervision** services (for a combined cost of US\$1,405,000). The two groups will be part of the team in the consulting firm hired for program management. The team will also include an environmental coordinator and experienced professionals who will each act as leader in the activities for: (i) compensation and resettlement; (ii) environmental supervision of works; (iii) social outreach and public information; (iv) institutional strengthening and environmental compensation; (v) urban redevelopment, landscape planning and urban integration (land use and land-use planning); and (vi) environmental monitoring and evaluation. The firm will also be responsible for environmental review of engineering designs, institutional liaison, the environmental management system for works, and support for the economic activities affected, among other things.

#### **F. Benefits**

- 4.22 The main expected benefits of the proposed program are: (i) savings in terms of travel time and transportation costs; (ii) improvements in pedestrian, cyclist and disabled access; (iii) reduced risk of traffic accidents; (iv) improvements in road connectivity and urban integration for different parts of the municipio; (v) shorter travel times and better service coverage for the bus rapid transit system; and (vi) reductions in air pollution levels. The program will give residents of SBC a more efficient, more equitable and safer urban transportation system, which should help bolster future urban development efforts in the municipal program service area and better ensure their sustainability. The more effective use of road infrastructure should also improve environmental conditions and revitalize the urban and economic development process in the municipio. In the medium term, better travel conditions and a more reliable transportation system should help improve the efficiency of business activities in the city, strengthening the competitiveness of the MSCB economy and, as a result, of the entire Sao Paulo Metropolitan Region.
- 4.23 While not officially classified as a social equity-enhancing project according to Bank criteria, the program will help develop a more efficient and effective public transportation system producing benefits for low-income residents by giving them better access to available social services and creating new employment opportunities by increasing and improving their mobility.

## **G. Risks**

- 4.24 The program poses no special risks. From an *institutional* standpoint, the MSBC is a competent executing agency, as demonstrated by its extensive experience in contracting works out to private enterprises. It has a sound organizational structure and will be assisted by a management support firm in implementing the program. In the *technical area*, works and other interventions planned are not overly complex and there is a large domestic and international market of construction and supervision firms trained to perform this type of work. As for the program's *technical and operational sustainability*, the MSBC gives high priority to maintaining the municipal road network. The program will also strengthen municipal government departments in charge of the management of public works and the transportation system through training and skills development activities incorporated into its institutional strengthening plan. The MSBC is in a sound *financial position*, posting surpluses for the last few fiscal periods after restructuring its federal government debt, and has COFIEX authorization to negotiate the Bank loan. As far as *environmental* risks are concerned, the prospective works should have no major indirect environmental impacts and any direct impacts are related to their construction and will be appropriately addressed under specific programs (resettlement) and in construction and supervision contracts. Municipal government elections are scheduled to be held in 2004, which poses the risk of a *change in the city administration*, which could affect program implementation. However, this risk is mitigated by the current interest in the program on the part of urban transportation system users and operators (stakeholders) since, with the various promotional and information activities conducted to date, the public has been made aware of its benefits and will demand that it be pursued. The hiring of a management support firm to assist the PCU further ensures the continuity of process in the event of a change of administration.

**SÃO BERNARDO DO CAMPO URBAN TRANSPORTATION PROGRAM (BR-0400), BRAZIL**  
**LOGICAL FRAMEWORK**

Objective	Benchmarks	Means of verification	Assumptions
<b>Goal</b> Improve the mobility of residents of the city of São Bernardo do Campo.	Percentage of favorable ratings (ratings of satisfactory to excellent) of elements of the urban transportation system related directly to mobility are higher at the end of the program period than prior to its implementation. Specifically, a minimum 10% improvement in the percentage of favorable ratings of road infrastructure and mass transit services from 48% (question V1 in the survey form) to 53% and from 38% (question V2 in the survey form) to 42%, respectively, and a minimum 15% improvement in favorable ratings of traffic and road safety conditions from 32% (question V4 in the survey form) to 37% and from 43% (questions V5 in the survey form) to 49%, respectively.	Survey of 600 households conducted by the MSBC	The master plans developed under the program are implemented by the MSBC.
<b>Purpose</b> <ul style="list-style-type: none"> <li>Provide the residents of São Bernardo do Campo with a more efficient urban transportation system (shorter travel times, lower unit operating costs, better safety conditions and better environmental conditions) improving future urban development prospects for the municipal program service area.</li> </ul>	<b>Public transportation:</b> Reduction in fuel consumption by the municipal bus fleet (based on measurements for the Rudge Ramos-Alvarenga, and Riacho Grande-Rudge Ramos) by a minimum of 15% upon program completion period compared with average daily fuel consumption prior to the program (0.48 liter/km).  Reduction in average travel time by bus on the municipal mass transit system during peak hours (based on measurements for the Ferrazópolis-Rudge Ramos and Rudge Ramos-Alvarenga lines) by at least 10% upon program completion period compared with the average travel time prior to the program (65 minutes/trip).  Reduction in the average waiting time for buses at traffic lights during peak hours by at least 10% upon program completion period compared with their average waiting time prior to the program (10 minutes), based on measurements of travel time on the Ferrazópolis-Rudge Ramos and Rudge Ramos-Alvarenga lines.	MSBC monitoring reports   MSBC monitoring report   MSBC monitoring report	The new city administration installed in office at the beginning of 2005 will continue to support the program.

Objective	Benchmarks	Means of verification	Assumptions
	<p>Integrated operation of at least 40% of municipal bus lines upon program completion. There was no integration of any of the 54 existing bus lines in 2003 prior to the program.</p> <p><b>Private transportation:</b> Reduction in average fuel consumption by private automobiles in downtown São Bernardo (measured by floating vehicle data for two different routes within the município) by a minimum of 10% upon program completion compared with average daily fuel consumption on the same routes prior to the program (average of 0.15 liter of gasoline/km).</p> <p>Reduction in average travel time by private vehicle during peak hours in downtown São Bernardo (measured by floating vehicle data for two different routes within the município) by at least 10% upon program completion compared with the average travel time on the same two routes prior to the program (average of 17 minutes).</p> <p><b>Urban transportation system as a whole:</b> Reduction in the annual number of traffic accidents with casualties per 10,000 vehicles by at least 7% upon program completion. In 2002, 259 accidents per 10,000 vehicles occurred, of which 25.06 involved casualties. Of the casualties, 24.86 were injuries and 0.20 deaths.</p> <p><b>Environment:</b> Five percent reduction in the average level of the noise indicator measured at critical<sup>1</sup> points on the São Bernardo do Campo road network upon program completion compared with the average noise level measured at these same three points prior to the program (69.4 DB).</p> <p>The following minimum reductions in average air pollution indicators measured at three critical points<sup>1</sup> in São Bernardo do Campo upon program completion:</p>	<p>MSBC monitoring report</p> <p>MSBC monitoring report</p> <p>MSBC monitoring report</p> <p>Monitoring report by the Department of Housing and Environment</p> <p>Monitoring report by the Department of Housing and Environment</p>	<p>The new city administration installed in office at the beginning of 2005 will continue to support the program.</p> <p>The new city administration that takes office at the beginning of 2005 will continue to support the program.</p>

Objective	Benchmarks	Means of verification	Assumptions
	<ul style="list-style-type: none"> <li>Reduction in particles from 102 µg/m<sup>3</sup> to 55 µg/m<sup>3</sup> (daily average).</li> <li>Reduction in sulfur dioxide from 61 µg/m<sup>3</sup> to 35µg/m<sup>3</sup> (daily average).</li> <li>Reduction in nitrogen dioxide from 1730 µg/m<sup>3</sup> to 1280 µg/m<sup>3</sup> (hourly average).</li> </ul>		
<b>Outputs</b>			
1. Mass transit system	<p>Completion of the four upgrades to the mass transit system upon program completion according to the executive engineering designs approved by the MSBC.</p> <p>Completion and placement in service of the Alvarenga and Rudge Ramos integration terminals upon program completion.</p> <p>Completion according to plan of Alvarenga- Rudge Ramos trunk lines (via Ferrazópolis) and Rudge Ramos-Alvarenga (by tunnel) and corresponding feeder lines upon program completion.</p>	<p>Issuance of terms of acceptance for the works by the MSBC and opening of the corresponding sections to traffic.</p> <p>Issuance of terms of acceptance for the works by the MSBC.</p> <p>MSBC/PCU progress reports</p>	The MSBC maintains the political will to continue making improvements in the urban transportation system.
2. Municipal beltway	Construction of the five road works associated with the beltway and municipal road integration according to the engineering designs approved by the MSBC upon program completion.	Issuance of terms of acceptance for the works by the MSBC and opening of the respective road sections to traffic.	
3. Road safety	Implementation of all road safety-related projects, including pedestrian overpasses, guardrails/fences, street lighting, sidewalks, disabled access ramps, bicycle lanes, traffic lights at pedestrian crossings, etc. as envisaged under the program upon program completion.	MSBC/PCU project completion reports for works	
4. Traffic signal system	Installation of 65 new traffic signals and corresponding controllers, as well as a central traffic control unit as envisaged under the program upon program completion.	MSBC/PCU project completion reports	
5. Institutional strengthening			
5.1 Department of Transportation	Establishment by law of the Department of Transportation with the organizational structure agreed on with the Bank by the end of year 1 of the program.	MSBC/PCU progress reports	

Objective	Benchmarks	Means of verification	Assumptions
	<p>Completion of scheduled training activities in the general transportation planning, traffic engineering, mass transit, transportation infrastructure maintenance, and environment by the end of year 2.</p> <p>Procurement of envisaged transportation planning, traffic analysis, and road safety equipment and information system hardware by the end of year 2 of the program.</p> <p>Completion and approval of documents and activities relating to: (i) the master transportation plan; (ii) traffic generation areas; (iii) traffic safety; and (iv) master plan for transportation of hazardous materials upon program completion.</p>	<p>MSBC/PCU progress reports</p> <p>MSBC/PCU progress reports</p> <p>MSBC/PCU progress reports</p>	
5.2 Department of Public Works	<p>Completion of training activities for the construction and supervision of transportation infrastructure works and training in environmental issues by the end of year 2 of the program.</p> <p>Procurement of envisaged equipment for design work and for the supervision and maintenance of public works by the end of year 2 of the program.</p> <p>Completion of: (i) the construction supervision manual for transportation works; and (ii) the quality control manual for transportation works; (iii) handbook of technical specifications for designs and works; (iv) standard bidding documents for works; and (v) plan for recovery of environmental liabilities upon program completion.</p>	<p>MSBC/PCU progress reports</p> <p>MSBC/PCU progress reports</p> <p>MSBC/PCU progress reports</p>	
5.3 Department of Housing and Environment (SHAMA)	<p>Implementation of envisaged institutional strengthening activities upon program completion.</p> <p>Completion of scheduled training activities by the end of year 2 of the program period.</p> <p>Procurement of envisaged equipment by the end of year 2 of the program.</p> <p>Completion and approval of documents and activities relating to: (i) the municipal environmental system; (ii) monitoring of land use and occupation; (iii) support for environmental inspection service; (iv) environmental education; and (v) air and noise pollution monitoring, upon program completion.</p>	<p>MSBC/PCU progress reports</p> <p>MSBC/PCU progress reports</p> <p>SHAMA monitoring report</p> <p>MSBC/PCU progress reports</p>	

Objective	Benchmarks	Means of verification	Assumptions
6. Socio-environmental performance	<p>Correction of all environmental violations with respect to program works by the deadlines throughout the six-year program.</p> <p>All the families affected (an estimated 409) are compensated or resettled prior to initiation of the works on the respective section, in accordance with the resettlement plan:</p> <ul style="list-style-type: none"> <li>The family with the means to resettle independently (estimated at 1) compensated; those with semi-independent means (estimated at 15) receive government aid for resettlement</li> <li>All vulnerable families (estimated at 393) resettled in housing units rehabilitated by the government</li> </ul> <p>Upon program completion, at least:</p> <ul style="list-style-type: none"> <li>17.7 hectares of parks planted in conservation areas (APPs) and spring protection and recovery areas (APRMs) as compensation for the 5.9 hectares of APP areas affected</li> <li>8.7 hectares landscaped (trees, shrubs, and grassland planted) as compensation for the removal of 0.05 hectares of non-APP plant coverage</li> <li>another 5,800 trees planted as compensation for the 230 isolated trees removed</li> </ul> <p>Upon program completion, a 49-hectare municipal park established</p>	SHAMA monitoring report	
<b>Activities:</b> See cost table annexed to loan contract	Timetable and budget adjusted	MSBC/PCU progress reports	The exchange rate stays within an acceptable range. Counterpart funding contributions are made on schedule.

<sup>1</sup> The three critical points for the sample of air quality are: (i) Praça Samuel Sabatini, in the city center; (ii) the intersection of Avenida Alvarenga and Estrada dos Casa; and (iii) close to kilometer 17 of Via Anchieta Highway. Noise will be measured at eight points stipulated in the methodology, the Universal Transverse Mercator (UTM) coordinates of which are indicated in volume V-c, page VII.c-223 of the EIA.



**SÃO BERNARDO DO CAMPO URBAN TRANSPORTATION PROGRAM (BR-0400)**  
**PROCUREMENT PLAN**

**Project number:** BR-0400

**Loan number:**

**Project name:** São Bernardo do Campo Urban Transportation Program

**Executing agency:** São Bernardo do Campo Mayor's Office

**Telephone:** (55-11) 4332-6131

**E-mail:** [ucpbid@saobernardo.sp.gov.br](mailto:ucpbid@saobernardo.sp.gov.br)

Main items to be procured	Total value (US\$)	Source of financing		Procurement method <sup>1</sup>	Pre-qualification	Specific procurement notice	Current status <sup>2</sup>
		IDB (%)	Local (%)		Yes/No	Scheduled publication date	
<b>1. WORKS</b>							
Package 1: road works	30,094,360	70.0	30.0	ICB - LP	Yes	2nd half of 2004	Pending
Package 2: road works and road safety	38,433,320	70.0	30.0	ICB - LP	Yes	2nd half of 2004	Pending
Package 3: road works and traffic signals	26,538,650	70.0	30.0	ICB - LP	Yes	2nd half of 2004	Pending
<b>2. CONSULTING SERVICES</b>							
1) Support for program administration, management, and environmental supervision	3,580,000	60	40	ICB - BT	Yes	1st half of 2004	Pending
2) Works supervision—single package	2,537,000	60	40	ICB - BT	Yes	1st half of 2004	Pending
3) Master plan for transportation and traffic-generating areas	899,000	60	40	ICB - BT	Yes	2nd half of 2005	Pending
4) Master plan for transportation of hazardous materials	176,000	60	40	LCB - TP	No	2nd half of 2006	Pending
5) Traffic safety	183,000	60	40	LCB - TP	No	1st half of 2006	Pending

Main items to be procured	Total value (US\$)	Source of financing		Procurement method <sup>1</sup>	Pre-qualification	Specific procurement notice	Current status <sup>2</sup>
		IDB (%)	Local (%)		Yes/No	Scheduled publication date	
6) Individual consulting services (5 packages) for preparation of manuals, technical specifications, and support for the Department of Public Works	273,000	60	40	LCB - TP	No	2nd half of 2005	Pending
7) Consulting services (4 packages) for support for the Department of the Environment	480,000	60	40	LCB - TP	No	2nd half of 2005	Pending
<b>3. GOODS</b>							
1) Computer hardware and software	276,000	60	40	LCB - LP	No	1st half of 2006	Pending
2) Environmental monitoring equipment	115,000	60	40	LCB - LP	No	1st half of 2006	Pending

<sup>1</sup> Legend: **ICB**: International competitive bidding  
**DC**: Direct contracting without competition  
**TP**: Technical offer and price

**SH**: Shopping  
**LB**: Limited bidding  
**BT**: Best technical offer

**LCB**: Local competitive bidding  
**FA**: Force account  
**LP**: Lowest price

<sup>2</sup> The options are: Pending / Awarded / Cancelled